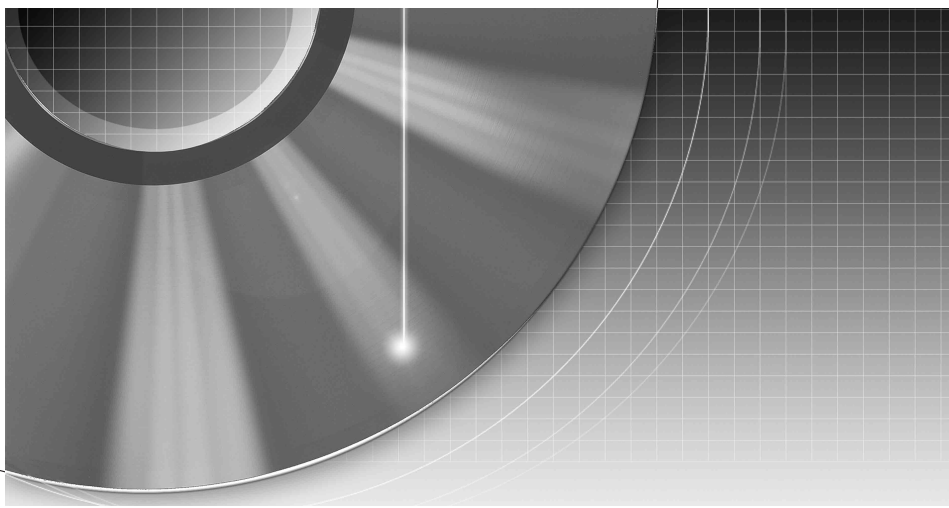
SONY

2-672-061-**11**(1)



DVD Recorder

Operating Instructions

To find out useful hints, tips and information about Sony products and services please visit: www.sony-europe.com/myproduct

RDR-GX120

DVD+ReWritable

DVD VIDEO

COMPACT disc DIGITAL VIDEO

VIDEOPlus+

© 2006 Sony Corporation

WARNING

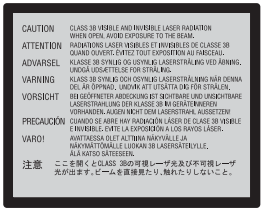
To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.
The mains lead must be changed only at a qualified service shop.

CLASS 1 LASER PRODUCT
LASER KLASSE 1
クラス 1 レーザ製品

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the laser protective housing inside the enclosure.

CAUTION

The use of optical instruments with this product will increase eye hazard. As the laser beam used in this DVD recorder is harmful to eyes, do not attempt to disassemble the cabinet.
Refer servicing to qualified personnel only.


CAUTION CLASS 3B VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO THE BEAM.
ATTENTION RADIATIONS LASER VISIBLES ET INVISIBLES DE CLASSE 3B QUAND OUVERT. EVITEZ TOUT EXPOSITION AU FAISCEAU.
ADVARSEL KLASSE 3B SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARNING KLASS 3B SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. UNDVIK ATT UTSÄTTA DIG FÖR STRÅLEN.
VORSICHT BEI GEÖFFNETER ABDECKUNG IST SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG DER KLASSE 3B IN GERÄTEINNEREN VORHANDEN. AUGEN NICHT DEM LASERSTRAHL AUSSETZEN!
PRECAUCIÓN CUANDO SE ABRE HAY RADIACIÓN LÁSER DE CLASE 3B VISIBLE E INVISIBLE. EVITE LA EXPOSICIÓN A LOS RAYOS LÁSER.
VARO! AVATTAESSA OLET ALTIINA NÄKYVÄLLE JA NÄKYMÄTTÖMÄLLE LUOKAN 3B LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
注意 ここを開くと CLASS 3B の可視レーザ光及び不可視レーザ光が出ます。ビームを直接見たり、触れたりしないこと。

This label is located on the laser protective housing inside the enclosure.

Notice for customers in the United Kingdom and Republic of Ireland

A molded plug complying with BS1363 is fitted to this equipment for your safety and convenience.
Should the fuse in the plug supplied need to be replaced, a 5 AMP fuse approved by ASTA or BSI to BS1362, (i.e., marked with ASTA or BSI mark) must be used.
If the plug supplied with this equipment has a detachable fuse cover, be sure to attach the fuse cover after you change the fuse. Never use the plug without the fuse cover. If you should lose the fuse cover, please contact your nearest Sony service station.

Precautions

- This unit operates on 220 – 240 V AC, 50/60 Hz. Check that the unit's operating voltage is identical with your local power supply.
- To prevent fire or shock hazard, do not place objects filled with liquids, such as vases, on the apparatus.
- Install this system so that the mains lead can be unplugged from the wall socket immediately in the event of trouble.

VIDEO Plus+ and PlusCode are registered trademarks of Gemstar Development Corporation.
The VIDEO Plus+ system is manufactured under license from Gemstar Development Corporation.

Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local Civic Office, your household waste disposal service or the shop where you purchased the product.

Precautions

This equipment has been tested and found to comply with the limits set out in the EMC Directive using a connection cable shorter than 3 metres.

On safety

Should any solid object or liquid fall into the cabinet, unplug the recorder and have it checked by qualified personnel before operating it any further.

On power sources

- The recorder is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the recorder itself has been turned off.
- If you are not going to use the recorder for a long time, be sure to disconnect the recorder from the wall outlet. To disconnect the AC power cord (mains lead), grasp the plug itself; never pull the cord.

On placement

- Place the recorder in a location with adequate ventilation to prevent heat build-up in the recorder.
- Do not place the recorder on a soft surface such as a rug that might block the ventilation holes.
- Do not place the recorder in a confined space such as a bookshelf or similar unit.
- Do not place the recorder in a location near heat sources, or in a place subject to direct sunlight, excessive dust, or mechanical shock.
- Do not place the recorder in an inclined position. It is designed to be operated in a horizontal position only.
- Keep the recorder and discs away from equipment with strong magnets, such as microwave ovens, or large loudspeakers.
- Do not place heavy objects on the recorder.

On recording

Make trial recordings before making the actual recording.

On compensation for lost recordings

Sony is not liable and will not compensate for any lost recordings or relevant losses, including when recordings are not made due to reasons including recorder failure, or when the contents of a recording are lost or damaged as a result of recorder failure or repair undertaken to the recorder. Sony will not restore, recover, or replicate the recorded contents under any circumstances.

Copyrights

- Television programmes, films, video tapes, discs, and other materials may be copyrighted. Unauthorized recording of such material may be contrary to the provisions of the copyright laws. Also, use of this recorder with cable television transmission may require authorization from the cable television transmitter and/or programme owner.
- This product incorporates copyright protection technology that is protected by U.S. patents and other intellectual property rights. Use of this copyright protection technology must be authorized by Macrovision, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision. Reverse engineering or disassembly is prohibited.

Copy guard function

Since the recorder has a copy guard function, programmes received through an external tuner (not supplied) may contain copy protection signals (copy guard function) and as such may not be recordable, depending on the type of signal.

IMPORTANT NOTICE

Caution: This recorder is capable of holding a still video image or on-screen display image on your television screen indefinitely. If you leave the still video image or on-screen display image displayed on your TV for an extended period of time you risk permanent damage to your television screen. Plasma display panels and projection televisions are especially susceptible to this.

If you have any questions or problems concerning your recorder, please consult your nearest Sony dealer.

About this manual

- In this manual, “disc” is used as a general reference for the DVDs or CDs unless otherwise specified by the text or illustrations.
- Icons, such as DVD, listed at the top of each explanation indicate what kind of media can be used with the function being explained.
- Instructions in this manual describe the controls on the remote. You can also use the controls on the recorder if they have the same or similar names as those on the remote.
- The on-screen display illustrations used in this manual may not match the graphics displayed on your TV screen.
- The explanations regarding DVDs in this manual refer to DVDs created on this recorder. The explanations do not apply to DVDs that are created on other recorders and played back on this recorder.

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Quick Guide to Disc Types

Recordable and playable discs

Type	Disc Logo	Icon used in this manual	Formatting (new discs)	Compatibility with other DVD players (finalising)
DVD+RW		+RW	Automatically formatted in +VR mode (DVD+RW VIDEO)	Playable on DVD+RW compatible players (automatically finalised)
DVD+R DVD+R DL		+R	Automatically formatted in +VR mode (DVD+R VIDEO)	Playable on most DVD players (finalisation necessary) (page 34)

Usable disc versions (as of March 2006)

- 8x-speed or slower DVD+RWs
- 16x-speed or slower DVD+Rs
- 8x-speed or slower DVD+R DL (Double Layer) discs

"DVD+RW," "DVD+R," and "DVD+R DL" are trademarks.

Discs that cannot be recorded on

- 8 cm discs
- DVD-R DL (Dual Layer) discs
- DVD-RWs/DVD-Rs

Playable discs

Type	Disc Logo	Icon used in this manual	Characteristics
DVD VIDEO		DVD	Discs such as movies that can be purchased or rented This recorder also recognizes DVD-R Dual Layer (Video mode) discs as DVD Video compatible discs.
DVD-RW/DVD-R		-RW VR -RW Video -R VR -R Video	DVD-RW/DVD-R discs that were recorded and finalised on other equipment
VIDEO CD		VCD	VIDEO CDs or CD-Rs/CD-RWs in VIDEO CD/Super VIDEO CD format
CD		CD	Music CDs or CD-Rs/CD-RWs in music CD format
DATA CD	—	DATA CD	CD-ROMs/CD-Rs/CD-RWs containing MP3 audio tracks
8 cm DVD+RW/ DVD-RW/DVD-R	—	—	8 cm DVD+RW, DVD-RW, and DVD-R recorded with a DVD video camera (Still images recorded with a DVD video camera cannot be played.)

"DVD VIDEO," "CD," "DVD-RW," and "DVD-R" are trademarks.

Discs that cannot be played

- PHOTO CDs
- CD-ROMs/CD-Rs/CD-RWs that are recorded in a format different from the formats mentioned in the table above.
- Data part of CD-Extras
- DVD-ROMs/DVD+RWs/DVD-RWs/ DVD+Rs/DVD-Rs that do not contain DVD Video.
- DVD Audio discs
- DVD-RAMs
- HD layer on Super Audio CDs
- DVD VIDEOs with a different region code (page 9).
- DVDs that were recorded on a different recorder and not correctly finalised.

Maximum recordable number of titles

Disc	Number of titles*
DVD+RW/DVD+R	49
DVD+R DL	49

* The maximum length for one title is eight hours.

Note on playback operations of DVD VIDEOs/VIDEO CDs

Some playback operations of DVD VIDEOs/VIDEO CDs may be intentionally set by software producers. Since this recorder plays DVD VIDEOs/VIDEO CDs according to the disc contents the software producers designed, some playback features may not be available. See the instructions supplied with the DVD VIDEOs/VIDEO CDs.

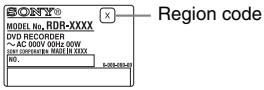
Region code (DVD VIDEO only)

Your recorder has a region code printed on the rear of the unit and will only play DVD VIDEOs (playback only) labelled with identical region codes. This system is used to protect copyrights.

DVD VIDEOs labelled will also play on this recorder.

If you try to play any other DVD VIDEO, the message “Playback prohibited by region code.” will appear on the TV screen.

Depending on the DVD VIDEO, no region code indication may be labelled even though playing the DVD VIDEO is prohibited by area restrictions.



Music discs encoded with copyright protection technologies

This product is designed to play back discs that conform to the Compact Disc (CD) standard.

Recently, various music discs encoded with copyright protection technologies are being marketed by some record companies. Please be aware that among those discs, there are some that do not conform to the CD standard and may not be playable by this product.

Note on DualDiscs

A DualDisc is a two sided disc product which mates DVD recorded material on one side with digital audio material on the other side. However, since the audio material side does not conform to the Compact Disc (CD) standard, playback on this product is not guaranteed.

Notes

- Some DVD+RWs/DVD+Rs, DVD-RWs/DVD-Rs, or CD-RWs/CD-Rs cannot be played on this recorder due to the recording quality or physical condition of the disc, or the characteristics of the recording device and authoring software. The disc will not play if it has not been correctly finalised. For more information, see the operating instructions for the recording device.
- You cannot shorten the time required for recording even with high-speed discs.
- It is recommended that you use discs with “For Video” printed on their packaging.
- You cannot add new recordings to DVD+Rs that contain recordings made on other DVD equipment.
- In some cases, you may not be able to add new recordings to DVD+RWs that contain recordings made on other DVD equipment. If you do add a new recording, note that this recorder will rewrite the DVD menu.
- You cannot edit recordings on DVD+RWs or DVD+Rs that are made on other DVD equipment.
- If the disc contains PC data unrecognizable by this recorder, the data may be erased.
- You may not be able to record on some recordable discs, depending on the disc.

Hooking Up the Recorder

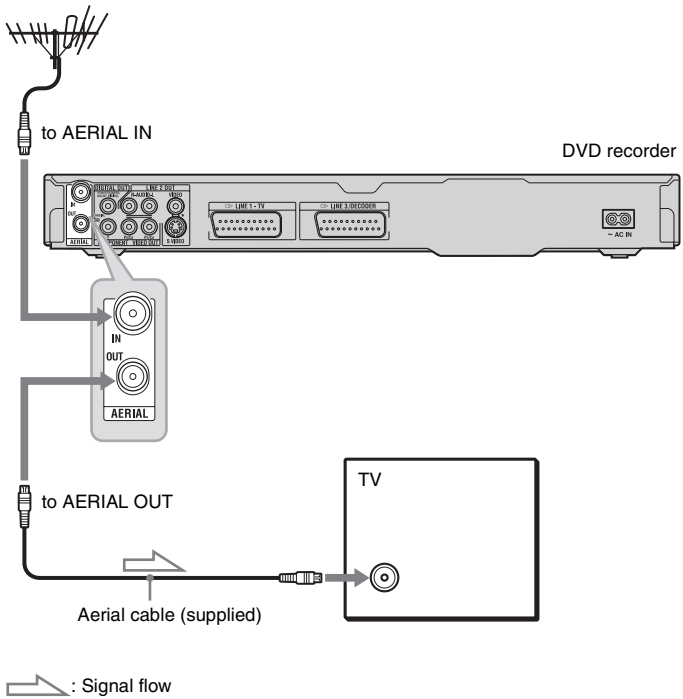
Follow steps 1 through 6 to hook up and adjust the settings of the recorder. Do not connect the mains lead until you reach "Step 4: Connecting the Mains Lead" on page 14.

Notes

- See "Specifications" (page 78) for a list of supplied accessories.
- Plug in cords securely to prevent unwanted noise.
- Refer to the instructions supplied with the components to be connected.
- You cannot connect this recorder to a TV that does not have a SCART or video input jack.
- Be sure to disconnect the mains lead of each component before connecting.

Step 1: Connecting the Aerial Cable

Connect the aerial cable by following the steps below.

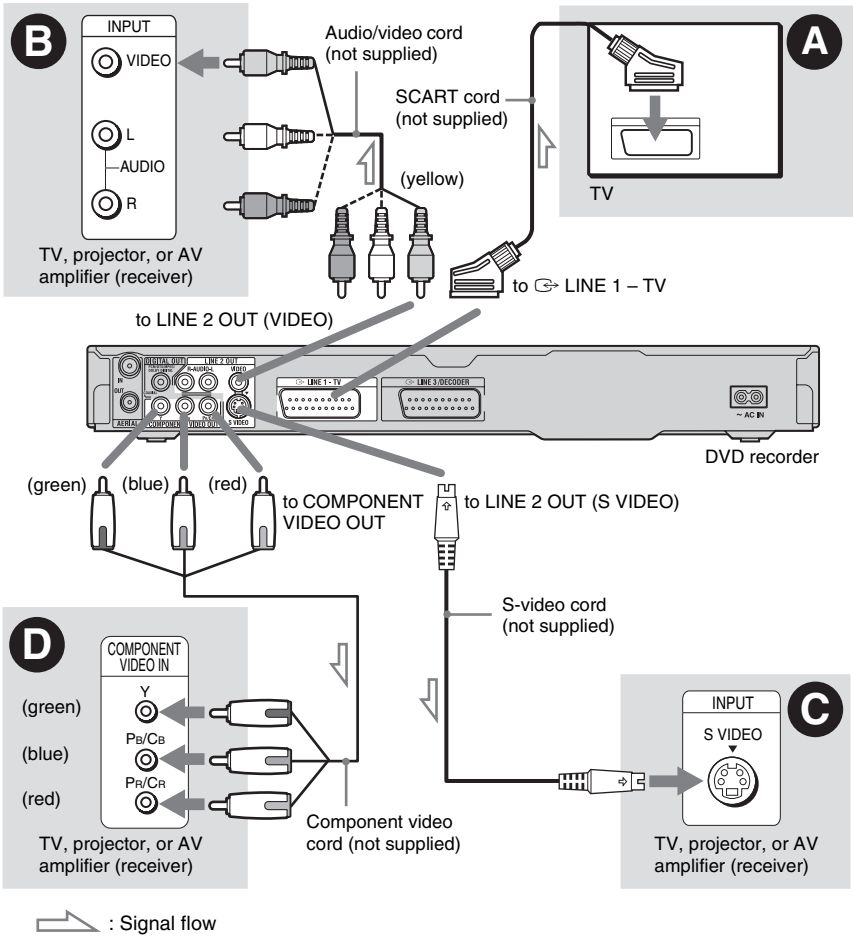


1 Disconnect the aerial cable from your TV, and connect it to AERIAL IN on the rear panel of the recorder.

2 Connect AERIAL OUT of the recorder to the aerial input of your TV using the supplied aerial cable.

Step 2: Connecting the Video Cords

Select one of the following patterns, Ⓐ through Ⓓ, according to the input jack on your TV monitor, projector, or AV amplifier (receiver). This will enable you to view pictures.



: Signal flow

Ⓐ SCART input jack

When you set "Easy Setup - Line1 Output" to "S Video" or "RGB" (page 18), use a SCART cord that conforms to the selected signal.

Ⓑ Video input jack

You will enjoy standard quality images.

Ⓒ S VIDEO input jack

You will enjoy high quality images.

Ⓓ Component video input jacks (Y, PB/CB, PR/CR)

You will enjoy accurate colour reproduction and high quality images.
If your TV accepts progressive 525p/625p format signals, you must use this connection and set "Component Out" in the "Video" setup to "On" (page 62). Then set "Progressive Output" of the "Video Output" to "On" in the "Video" setup to send progressive video signals. For details, see "Progressive Output" on page 62.

➡continued

When playing “wide screen” images

Some recorded images may not fit your TV screen. To change the picture size, see page 61.

If you are connecting to a VCR

Connect your VCR to the LINE 3/ DECODER jack on the recorder (page 19).

Notes

- Do not connect more than one type of video cord between the recorder and your TV at the same time.
- When you connect the recorder to your TV via the SCART jacks, the TV’s input source is set to the recorder automatically when you start playback. If necessary, press TV ⏎ to return the input to the TV.
- For correct SMARTLINK connection, you will need a SCART cord that has the full 21 pins. Refer to your TV’s instruction manual as well for this connection.
- If you connect this recorder to a TV with SMARTLINK, set “Easy Setup - Line1 Output” to “Video.”

About the SMARTLINK features (for SCART connections only)

If the connected TV (or other connected equipment such as a set top box) complies with SMARTLINK, NexTView Link[*3], MEGALOGIC[*1], EASYLINK[*2], CINEMALINK[*2], Q-Link[*3], EURO VIEW LINK[*4], or T-V LINK[*5], you can enjoy the following SMARTLINK features.

- Preset Download
  You can download the tuner preset data from your TV to this recorder, and tune the recorder according to that data in “Easy Setup.” This greatly simplifies the “Easy Setup” procedure. Be careful not to disconnect the cables or exit the “Easy Setup” function during this procedure (page 18).
- TV Direct Rec
  You can easily record what you are watching on your TV (page 27).
- One Touch Play
  You can turn on the recorder and TV, set the TV’s input to the recorder, and start playback with one touch of the ▷ (play) button (page 47).
- One Touch Menu
  You can turn on the recorder and TV, set the TV to the recorder’s programme position, and display the Title List menu with one touch of the TITLE LIST button (page 47).
- One Touch Timer
  You can turn on the recorder and TV, set the TV to the recorder’s programme position, and display the timer programming menu with one touch of the TIMER button (page 39).
- Automatic Power Off
  The recorder will turn off automatically if the recorder is not used after you turn off the TV.
- NexTView Download
  You can easily set the timer by using the NexTView Download function on your TV. See your TV’s instruction manual.

[*1] “MEGALOGIC” is a registered trademark of Grundig Corporation.
[*2] “EASYLINK” and “CINEMALINK” are trademarks of Philips Corporation.
[*3] “Q-Link” and “NexTView Link” are trademarks of Panasonic Corporation.
[*4] “EURO VIEW LINK” is a trademark of Toshiba Corporation.
[*5] “T-V LINK” is a trademark of JVC Corporation.

Hint

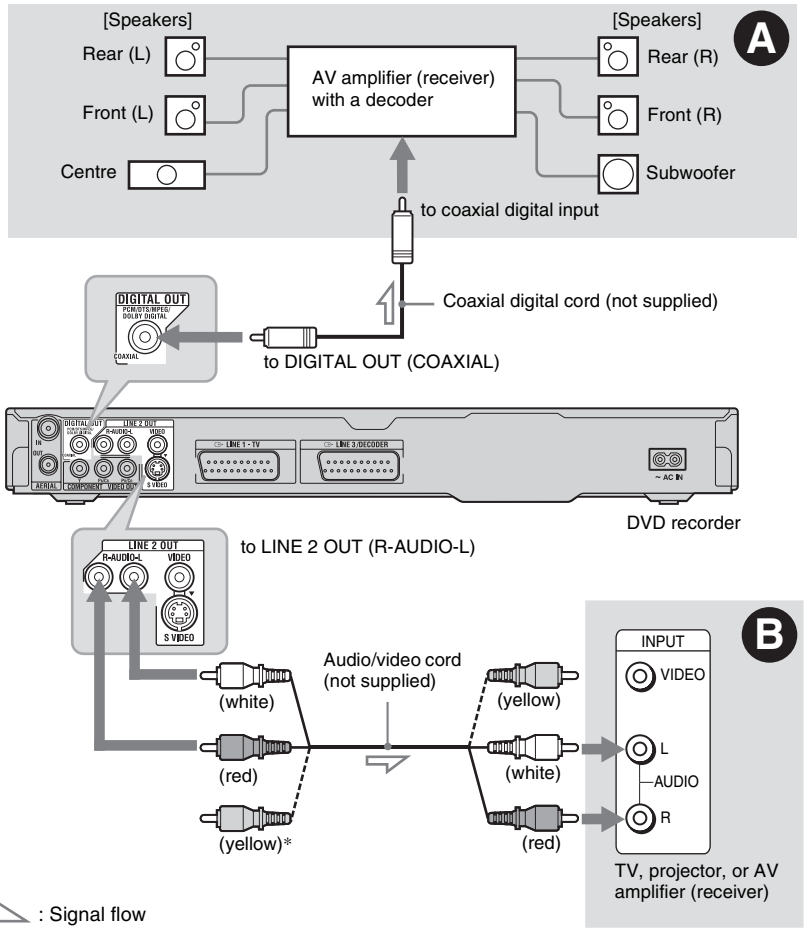
SMARTLINK also works with TVs or other equipment having EPG Timer Control, EPG Title Download, and Now Recording functions. For details, refer to the operating instructions supplied with your TV or other equipment.

Notes

- The SMARTLINK features are available only when “Video” is selected in “Line1 Output.”
- The SMARTLINK features are not available while the power is off when “Power save standby” is set to “On” (page 69).
- Not all TVs respond to the functions above.

Step 3: Connecting the Audio Cords

Select one of the following patterns, Ⓐ or Ⓑ, according to the input jack on your TV monitor, projector, or AV amplifier (receiver). This will enable you to listen to sound.



* The yellow plug is used for video signals (page 11).

Ⓐ Digital audio input jack

If your AV amplifier (receiver) has a Dolby*1 Digital, DTS*2, or MPEG audio decoder and a digital input jack, use this connection. You can enjoy Dolby Digital (5.1ch), DTS (5.1ch), and MPEG audio (5.1ch) surround effects.

Ⓑ Audio L/R (left/right) input jacks

This connection will use your TV's or stereo amplifier's (receiver's) two speakers for sound.

Hint

For correct speaker location, see the operating instructions supplied with the connected components.

Notes

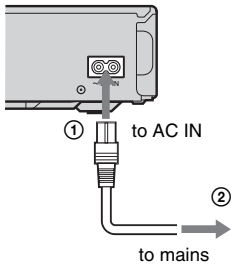
- Do not connect your TV's audio output jacks to the LINE IN (R-AUDIO-L) jacks at the same time. This will cause unwanted noise to come from your TV's speakers.
- With connection Ⓑ, do not connect the LINE IN (R-AUDIO-L) and LINE 2 OUT (R-AUDIO-L) jacks to your TV's audio output jacks at the same time. This will cause unwanted noise to come from your TV's speakers.
- With connection Ⓐ, after you have completed the connection, make the appropriate settings under "Easy Setup - Audio Connection" (page 18). Otherwise, no sound or a loud noise will come from your speakers.

*1 Manufactured under license from Dolby Laboratories.
"Dolby" and the double-D symbol are trademarks of Dolby Laboratories.

*2 "DTS" and "DTS Digital Out" are trademarks of Digital Theater Systems, Inc.

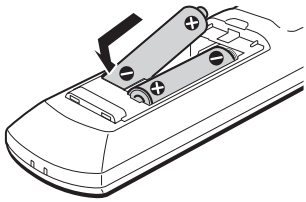
Step 4: Connecting the Mains Lead

Connect the supplied mains lead to the AC IN terminal of the recorder. Then plug the recorder and TV mains leads (power cords) into the mains. After you connect the mains lead, **you must wait for a short while before operating the recorder.** You can operate the recorder once the front panel display lights up and the recorder enters standby mode.
If you connect additional equipment to this recorder (page 19), be sure to connect the mains lead after all connections are complete.



Step 5: Preparing the Remote

You can control the recorder using the supplied remote. Insert two R6 (size AA) batteries by matching the ⊕ and ⊖ ends on the batteries to the markings inside the battery compartment. When using the remote, point it at the remote sensor on the recorder.



Notes

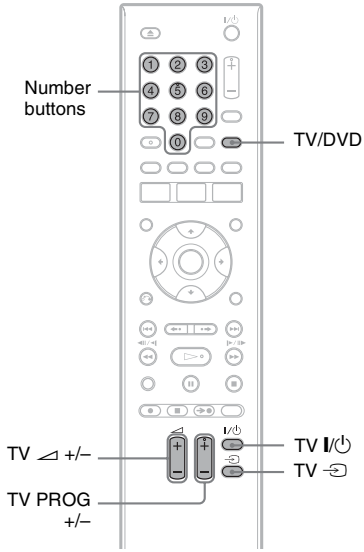
- If the supplied remote interferes your other Sony DVD recorder or player, change the command mode number for this recorder (page 16).
- Use the batteries correctly to avoid possible leakage and corrosion. Should leakage occur, do not touch the liquid with bare hands. Observe the following:
  - Do not use a new battery with an old battery, or batteries of different manufacturers.
  - Do not attempt to recharge the batteries.
  - If you do not intend to use the remote for an extended period of time, remove the batteries.
  - If battery leakage occurs, wipe out any liquid inside the battery compartment, and insert new batteries.
- Do not expose the remote sensor (marked on the front panel) to strong light, such as direct sunlight or a lighting apparatus. The recorder may not respond to the remote.

Controlling TVs with the remote

You can adjust the remote's signal to control your TV.

Notes

- Depending on the connected unit, you may not be able to control your TV with some or all of the buttons below.
- If you enter a new code number, the code number previously entered will be erased.
- When you replace the batteries of the remote, the code number may be reset to the default setting. Set the appropriate code number again.



1 Hold down the TV I/⏻ button located at the bottom of the remote.

Do not press the I/⏻ button at the top of the remote.

2 With the TV I/⏻ button pressed down, enter the TV's manufacturer code using the number buttons.

For instance, to enter "09," press "0" then "9." After you enter the last number, release the TV I/⏻ button.

Code numbers of controllable TVs

If more than one code number is listed, try entering them one at a time until you find the one that works with your TV.

Manufacturer	Code number
Sony	01 (default)
Hitachi	24
JVC	33
Panasonic	17, 49
Philips	06, 08
Samsung	71
Sanyo	25
Thomson	43
Toshiba	38

The remote performs the following:

Buttons	Operations
TV I/⏻	Turns your TV on or off
TV ◿ (volume) +/–	Adjusts the volume of your TV
TV PROG +/–	Selects the programme position on your TV
TV ⏎	Switches your TV's input source

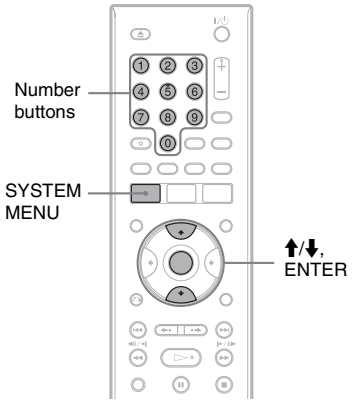
To operate the TV/DVD button (for SCART connections only)

The TV/DVD button switches between the recorder and the last input source selected on the TV. Point your remote at the recorder when using this button.

When you connect the recorder to the TV via the SCART jacks, the input source for the TV is set to the recorder automatically when you start playback. To watch another source, press the TV/DVD button to switch the TV's input source.

If you have a Sony DVD player or more than one Sony DVD recorder

If the supplied remote interferes with your other Sony DVD recorder or player, set the command mode number for this recorder and the supplied remote to one that differs from the other Sony DVD recorder or player after you have completed "Step 6: Easy Setup." The default command mode setting for this recorder and the supplied remote is DVD3.

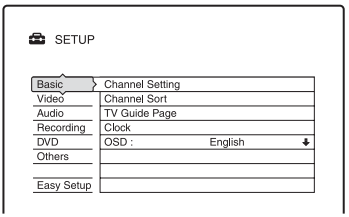


1 Check that "Easy Setup" (page 18) has been finished. If "Easy Setup" has not been finished, first perform "Easy Setup."

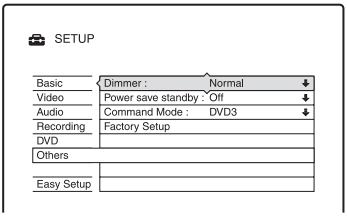
2 Press SYSTEM MENU.

The System Menu appears.

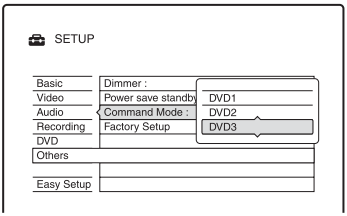
3 Select "SETUP," and press ENTER.



4 **Select “Others,” and press ENTER.**



5 **Select “Command Mode,” and press ENTER.**



6 **Select a Command Mode (DVD1, DVD2, or DVD3), and press ENTER.**

7 **Set the Command Mode for the remote so it matches the Command Mode for the recorder you set above.**

Follow the steps below to set the Command Mode on the remote.

① Hold down ENTER.

② While holding down ENTER, enter the Command Mode code number using the number buttons.

Command Mode	Code number
DVD1	number button 1
DVD2	number button 2
DVD3	number button 3

③ Hold down both the number and ENTER buttons at the same time for more than three seconds.

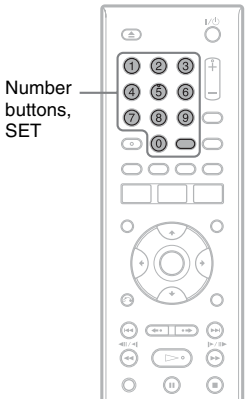
To check the Command Mode for the recorder

Press ■ on the recorder when the recorder is turned off. The Command Mode for the recorder appears in the front panel display.

If the Command Mode for the recorder has not been changed, set the Command Mode for the remote to the default setting of DVD3. If the Command Mode for the remote is changed to DVD1 or DVD2, you will be unable to operate this recorder.

Changing programme positions of the recorder using the remote

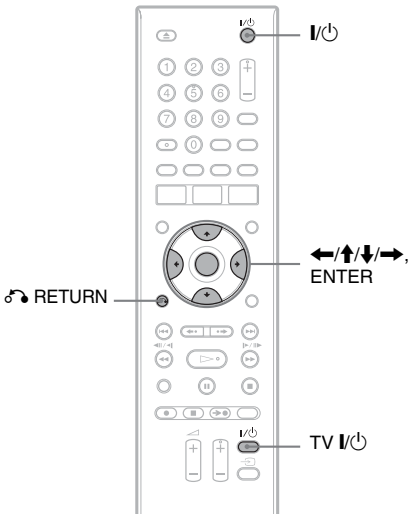
You can change programme positions of the recorder using the number buttons.



Example: for channel 50
Press “5,” “0,” then press SET.

Step 6: Easy Setup

Make the basic adjustments by following the on-screen instructions in “Easy Setup.”



1 Turn on the recorder and your TV. Then switch the input selector on your TV so that the signal from the recorder appears on your TV screen.

The initial settings message appears.

- If this message does not appear, select “Easy Setup” from “SETUP” in the System Menu (“Settings and Adjustments” on page 57).

2 Press ENTER.

Follow the on-screen instructions to make the following settings.

◆ Easy Setup - OSD

Select a language for the on-screen displays.

◆ Easy Setup - Tuner System

Select your country/region or language. The programme position order will be set according to the country/region you set. To set the programme positions manually, see page 57.

- If you live in a French speaking country that is not listed on the display, select “ELSE - English.”

◆ Easy Setup - Clock

The recorder will automatically search for a clock signal. If a clock signal cannot be found, set the clock manually using ←/↑/↓/→, and press ENTER.

◆ Easy Setup - TV Type (page 61)

If you have a wide-screen TV, select “16:9.” If you have a standard TV, select either “4:3 Letter Box” (shrink to fit) or “4:3 Pan Scan” (stretch to fit). This will determine how “wide-screen” images are displayed on your TV.

◆ Easy Setup - Component Out

If you are using the COMPONENT VIDEO OUT jack, select “On.”

◆ Easy Setup - Line3 Input

If you plan to connect a decoder such as a PAY-TV/Canal Plus analogue decoder to the LINE 3/DECODER jack, select “Yes.”

◆ Easy Setup - Line1 Output

To output video signals, select “Video.” To output S video signals, select “S Video.”
To output RGB signals, select “RGB.”
Select “Video” to enjoy the SMARTLINK features.

- If you set “Easy Setup - Component Out” to “On,” you cannot select “RGB.”
- If you set “Easy Setup - Line3 Input” to “Yes,” you cannot select “S Video.”

◆ Easy Setup - Audio Connection

If you connected an AV amplifier (receiver) using a coaxial cord, select “Yes : DIGITAL OUT” and set the digital output signal (page 64).

3 Press ENTER when “Finish” appears.

“Easy Setup” is finished.

To return to the previous step

Press RETURN.

Hints

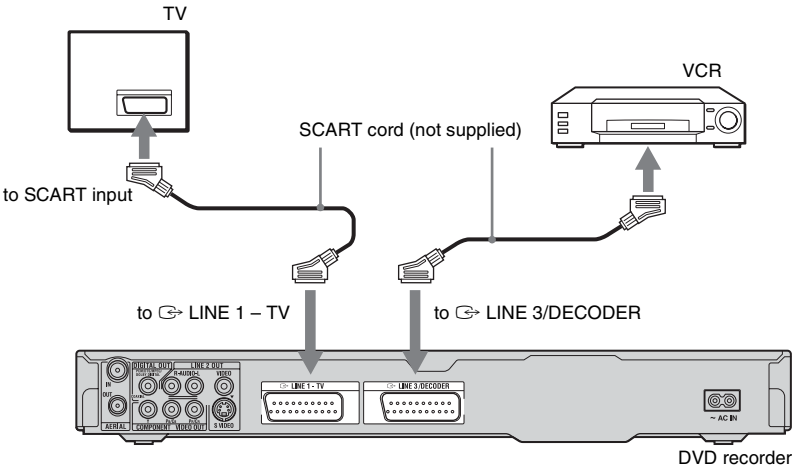
- If your AV amplifier (receiver) has an MPEG audio decoder, set “MPEG” to “MPEG” (page 64).
- If you want to run “Easy Setup” again, select “Easy Setup” from “SETUP” in the System Menu (page 70).

Connecting a VCR or Similar Device

After disconnecting the recorder's mains lead from the mains, connect a VCR or similar recording device to the LINE IN jacks of this recorder.
For details, refer to the instruction manual supplied with the connected equipment.
To record on this recorder, see "Recording from connected equipment without a timer" on page 45.

Connecting to the LINE 3/DECODER jack

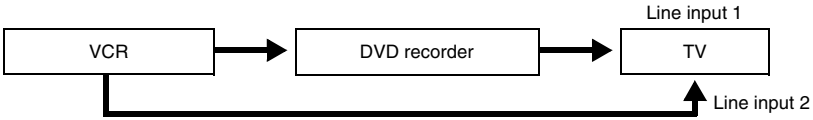
Connect a VCR or similar recording device to the LINE 3/DECODER jack of this recorder.



Notes

- Pictures containing copy protection signals that prohibit any copying cannot be recorded.
- If you pass the recorder signals through a VCR, you may not receive a clear image on your TV screen.

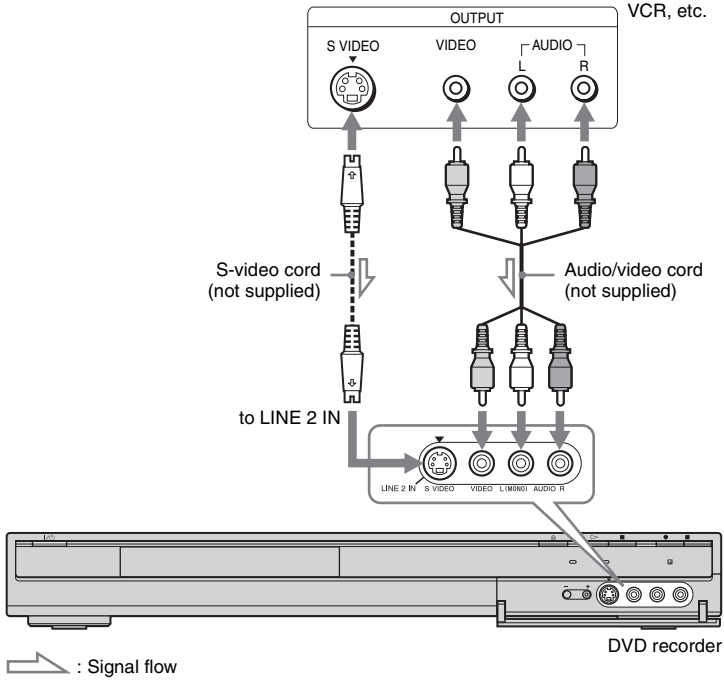
Be sure to connect your VCR to the DVD recorder and to your TV in the order shown below. To watch video tapes, watch the tapes through a second line input on your TV.



- The SMARTLINK features are not available for devices connected via the DVD recorder's LINE 3/DECODER jack.
- When you record to a VCR from this DVD recorder, do not switch the input source to TV by pressing the TV/DVD button on the remote.
- If you disconnect the recorder's mains lead, you will not be able to view the signals from the connected VCR.

Connecting to the LINE 2 IN jacks on the front panel

Connect a VCR or similar recording device to the LINE 2 IN jacks of this recorder. If the equipment has an S-video jack, you can use an S-video cord instead of an audio/video cord.



Hint

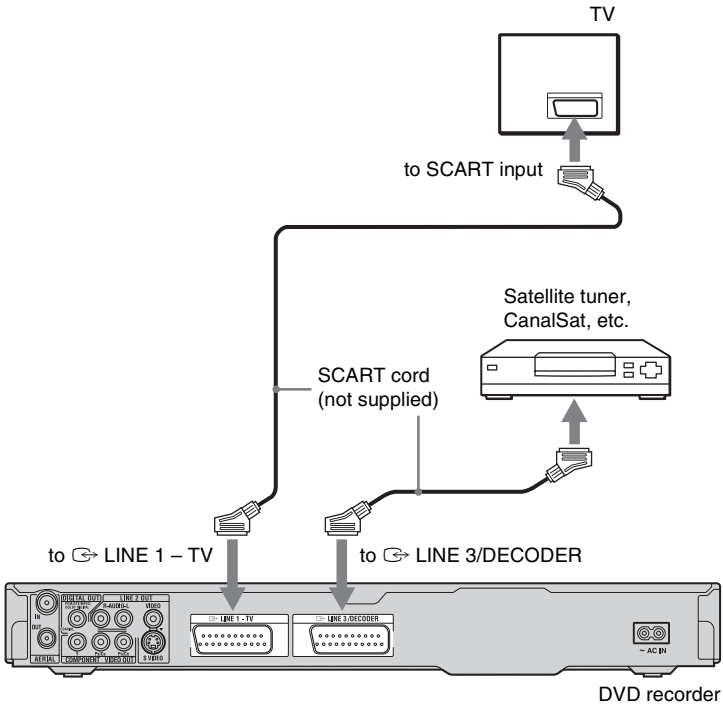
When the connected equipment outputs only monaural sound, connect to just the L(MONO) and VIDEO input jacks on the front of the recorder. Do not connect the R input jack.

Notes

- Do not connect the yellow LINE IN (VIDEO) jack when using an S-video cord.
- Do not connect the output jack of this recorder to another equipment's input jack with the other equipment's output jack connected to the input jack of this recorder. This may cause noise (feedback).
- Do not connect more than one type of video cord between the recorder and your TV at the same time.

Connecting to a Satellite or Digital Tuner

Connect a satellite or digital tuner to this recorder using the LINE 3/DECODER jack. Disconnect the recorder's mains lead from the mains when connecting the tuner.
To use the Synchro-Rec function, see below. Do NOT set "Line3 Input" of the "Scart Setting" to "Decoder" in the "Video" setup when making this connection.



If the satellite tuner can output RGB signals

This recorder accepts RGB signals. If the satellite tuner can output RGB signals, connect the TV SCART connector on the satellite tuner to the LINE 3/DECODER jack, and set "Line3 Input" of "Scart Setting" to "Video/RGB" in the "Video" setup (page 62). Note that this connection and setup disable the SMARTLINK function. If you want to use the SMARTLINK function with a compatible set top box, see the instructions supplied with the set top box.

If you want to use the Synchro Rec function

This connection is necessary to use the Synchro-Recording function. See "Recording from connected equipment with a timer (Synchro Rec)" on page 44.
Set "Line3 Input" of "Scart Setting" in the "Video" setup (page 62) according to the specifications of your satellite tuner. See your satellite tuner's instructions for more information.
If you are using a B Sky B tuner, be sure to connect the tuner's VCR SCART jack to the LINE 3/DECODER jack. Then set "Line3 Input" of "Scart Setting" according to the specifications of the VCR SCART jack on your satellite tuner.

➡*continued*

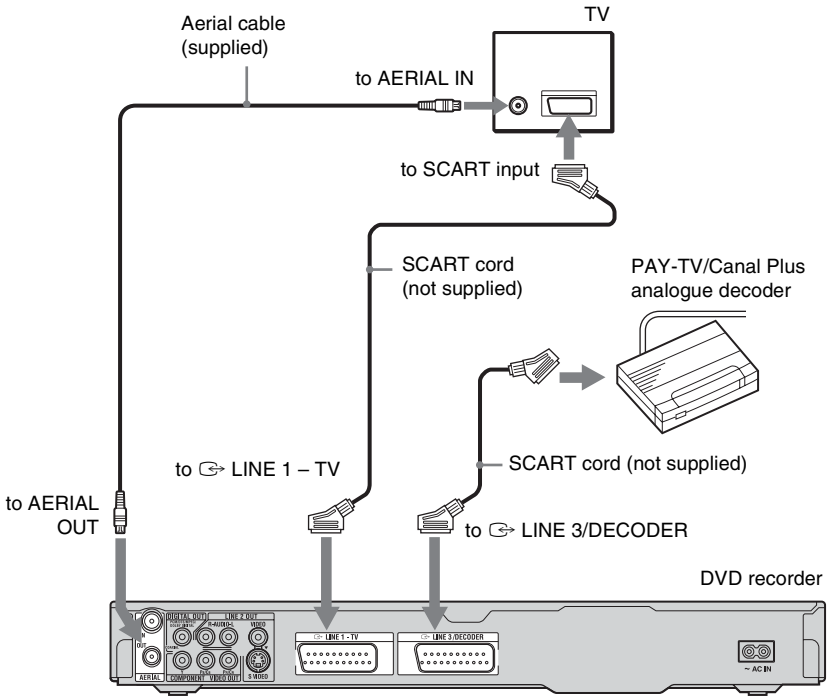
Notes

- Synchro-Recording does not work with some tuners. For details, see the tuner's operating instructions.
- If you disconnect the recorder's mains lead, you will not be able to view the signals from the connected tuner.

Connecting a PAY-TV/Canal Plus Analogue Decoder

You can watch or record PAY-TV/Canal Plus analogue decoder programmes if you connect a decoder (not supplied) to the recorder. Disconnect the recorder's mains lead from the mains when connecting the decoder. Note that when you set "Line3 Input" to "Decoder" in step 5 of "Setting PAY-TV/Canal Plus analogue programme positions" (page 24), you will not be able to select "L3" because Line 3 will become a dedicated line for the decoder.

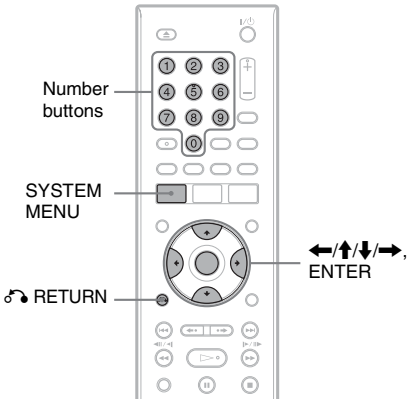
Connecting a decoder



➡continued

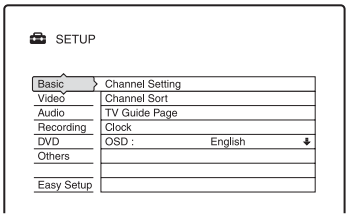
Setting PAY-TV/Canal Plus analogue programme positions

To watch or record PAY-TV/Canal Plus analogue programmes, set your recorder to receive the programme positions using the on-screen display.
In order to set the programme positions correctly, be sure to follow all of the steps below.

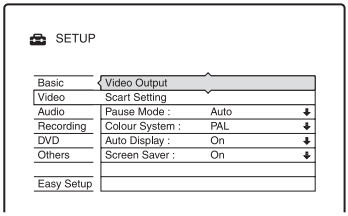


1 **Press SYSTEM MENU.**
The System Menu appears.

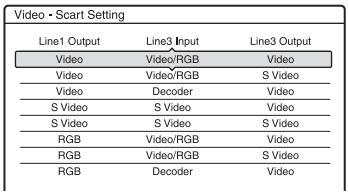
2 **Select “SETUP,” and press ENTER.**



3 **Select “Video,” and press ENTER.**



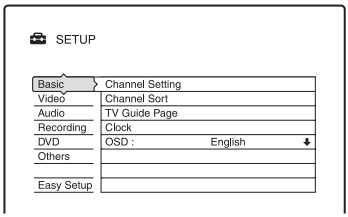
4 **Select “Scart Setting,” and press ENTER.**



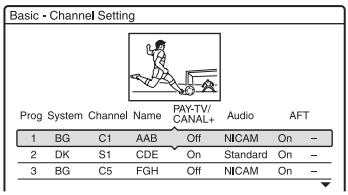
5 **Press ↑/↓ to select “Video” or “RGB” for “Line1 Output,” “Decoder” for “Line3 Input,” and “Video” for “Line3 Output,” and press ENTER.**
The “Video” setup display appears again.

6 **Press RETURN to return the cursor to the left column.**

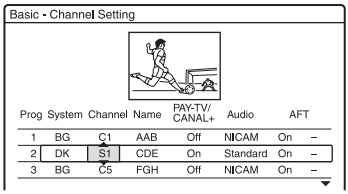
7 **Select “Basic,” and press ENTER.**



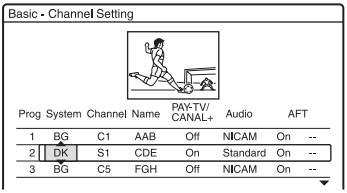
8 **Select “Channel Setting,” and press ENTER.**


Basic - Channel Setting
Prog System Channel Name PAY-TV/ CANAL+ Audio AFT
1 BG C1 AAB Off NICAM On –
2 DK S1 CDE On Standard On –
3 BG C5 FGH Off NICAM On –

9 **Press ↑/↓ to select the desired programme position, and press ENTER.**

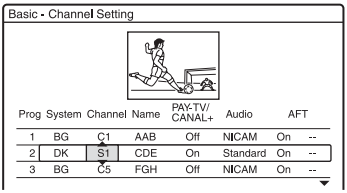

Basic - Channel Setting
Prog System Channel Name PAY-TV/ CANAL+ Audio AFT
1 BG C1 AAB Off NICAM On –
2 DK S1 CDE On Standard On –
3 BG C5 FGH Off NICAM On –

10 **Select “System” using ←/→.**


Basic - Channel Setting
Prog System Channel Name PAY-TV/ CANAL+ Audio AFT
1 BG C1 AAB Off NICAM On --
2 DK S1 CDE On Standard On --
3 BG C5 FGH Off NICAM On --

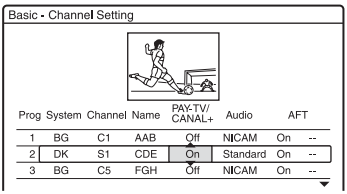
11 **Press ↑/↓ to select an available TV system, BG, DK or I.**

12 **Select “Channel” using ←/→.**


Basic - Channel Setting
Prog System Channel Name PAY-TV/ CANAL+ Audio AFT
1 BG C1 AAB Off NICAM On --
2 DK S1 CDE On Standard On --
3 BG C5 FGH Off NICAM On --

13 **Select the PAY-TV/Canal Plus analogue programme position using ↑/↓ or number buttons.**

14 **Select “PAY-TV/ CANAL+” using ←/→.**


Basic - Channel Setting
Prog System Channel Name PAY-TV/ CANAL+ Audio AFT
1 BG C1 AAB Off NICAM On --
2 DK S1 CDE On Standard On --
3 BG C5 FGH Off NICAM On --

15 **Select “On” using ↑/↓, and press ENTER.**

To return to the previous step

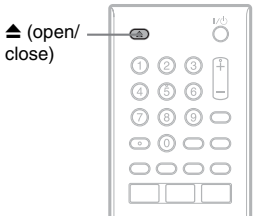
Press ↩ RETURN.

Note

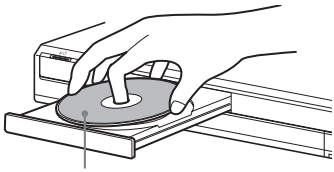
If you disconnect the recorder’s mains lead, you will not be able to view the signals from the connected decoder.

1. Inserting a Disc

+RW -RW VR -RW Video +R -R VR
-R Video DVD VCD CD DATA CD



1 Press ⏏ (open/close), and place a disc on the disc tray.



Recording/playing side facing down

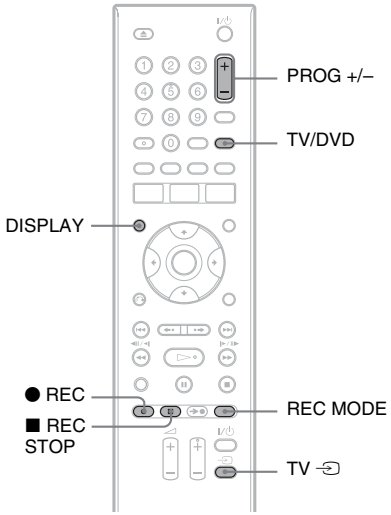
2 Press ⏏ (open/close) to close the disc tray.

Wait until "LOAD" disappears from the front panel display.
Unused DVDs are formatted automatically.
If the disc is recordable on this recorder, you can manually re-format the disc to make a blank disc (page 35).

2. Recording a Programme

+RW +R

This section introduces the basic operation to record a current TV programme to a disc (DVD). For an explanation of how to make timer recordings, see page 36.



1 Insert a recordable DVD.

2 Press PROG +/– to select the programme position or input source you want to record.

3 Press REC MODE repeatedly to select the recording mode.

Each time you press the button, the display on the TV screen changes as follows:

HQ → HSP → SP → LSP → SLP ← EP ← LP ← ESP

For more details about the recording mode, see page 36.

4 Press ● REC.

Recording starts.
Recording stops automatically after 8 hours of continuous recording or when the DVD is full.

To stop recording

Press ■ REC STOP.
Note that it may take a few seconds for recorder to stop recording.

To watch another TV programme while recording

If your TV is connected to the ⇨ LINE 1 – TV jack, set your TV to the TV input using the TV/DVD button and select the programme you want to watch. If your TV is connected to the LINE 2 OUT or COMPONENT VIDEO OUT jacks, set the TV to TV input using the TV ⇦ button (page 15).

TV Direct Rec

If you are using the SMARTLINK connection, you can easily record what you are watching on your TV.
When the TV is turned on, press ● REC. The recorder automatically turns on and starts recording what you are watching on the TV.

Note

If "TV" appears in the front panel display, you cannot turn off the TV or change the programme position during TV Direct Rec. To turn off the function, set "TV Direct Rec" to "Off" in the "Recording" setup (page 66).

About the Teletext function

Some broadcast systems ensure a Teletext service* in which the complete programmes and their data (title, date, programme position, recording start time etc.) are stored day by day. When recording a programme, the recorder automatically takes the programme name from the Teletext pages and stores it as the title name. For details, see "TV Guide Page" on page 59.
Note that the Teletext information will not appear on your TV screen. To view the Teletext information on your TV screen, press TV/DVD on the remote to switch the input source to your TV (page 15).
* not available in some areas

Notes

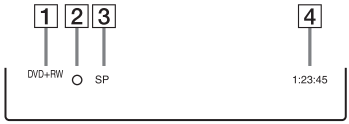
- After pressing ● REC, it may take a short while to start recording.
- You cannot change the recording mode while recording.
- If there is a power failure, the programme you are recording may be erased.
- You cannot watch a PAY-TV/Canal Plus programme while recording another PAY-TV/Canal Plus programme.
- To use the TV Direct Rec function, you must first correctly set the recorder's clock.

Checking the disc status while recording

You can check the recording information such as recording time or disc type.

Press DISPLAY during recording.

The recording information appears.



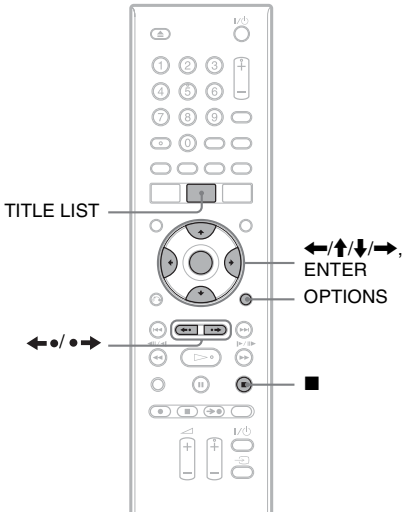
1 Disc type/format
2 Recording status
3 Recording mode
4 Recording time

Press DISPLAY to turn off the display.

3. Playing the Recorded Programme (Title List)

+RW -RW VR -RW Video +R -R VR -R Video

To play a recorded title, select the title from the Title List.



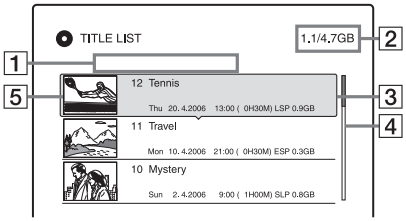
1 Insert a DVD.

See “1. Inserting a Disc” on page 26. Playback starts automatically depending on the disc.

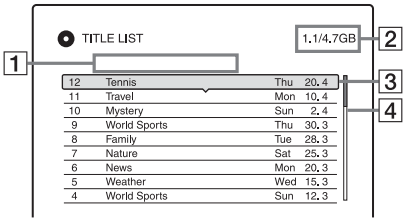
2 Press TITLE LIST.

To show the extended Title List, press OPTIONS to select “Display List,” and press ENTER.

Title List with Thumbnail Images (Example: DVD+RW)



Extended Title List



1 Title type:
Displays the title type (Original or Playlist) for DVD-RWs/DVD-Rs (VR mode).

2 Disc space (remainder/total)

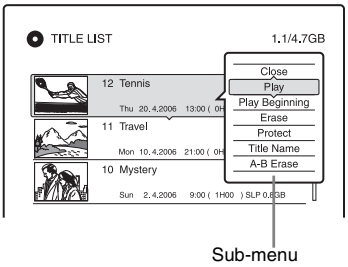
3 Title information:
Displays the title number, title name, and recording date. Title size is shown in the Thumbnail title list.
● (red): Indicates that the title is currently being recorded.
🔒: Indicates the protected title.

4 Scroll bar:
Appears when all of the titles do not fit on the list. To view the hidden titles, press ↑/↓.

5 Title’s thumbnail picture
The still images for each title are displayed.

3 Select a title, and press ENTER.

The sub-menu appears.
The sub-menu displays options applicable only to the selected item. The displayed options differ depending upon the model, situation, and disc type.



4 Select "Play," and press ENTER.

Playback starts from the selected title.

To stop playback

Press ■ (stop).

To scroll the list display by page (Page mode)

Press ←•/•→ while the list display is turned on. Each time you press ←•/•→, the entire Title List changes to the next/previous page of titles.

About the Title List for DVD-RWs/DVD-Rs (VR mode)

You can switch the Title List to show Original or Playlist titles.
While the Title List menu is turned on, press ←/→.
Note that RDR-GX120 cannot record to DVD-RW/DVD-R discs.

To change the title order (Sort)

While the Title List menu is turned on, press OPTIONS to select "Sort Titles." Press ↑/↓ to select the item, and press ENTER.

Order	Sorted
By Date	In order of when the titles were recorded. The title that is recorded most recently is listed at the top.
By Title	In alphabetical order.
By Number	In order of recorded title number.

To turn off the Title List

Press TITLE LIST.

Hints

- After recording, the first scene of the recording (the title) is automatically set as the thumbnail picture.
- You can select "TITLE LIST" from the System Menu.

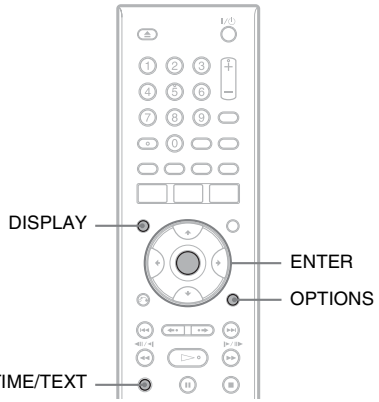
Notes

- RDR-GX120 cannot record to DVD-R/DVD-RW discs, but can play DVD-R/DVD-RW discs recorded on other recorders.
- The title names may not appear for DVDs created on other DVD recorders.
- It may take a few seconds for the thumbnail pictures to be displayed.
- After editing, the title thumbnail picture may change to the first scene of the recording (title).

4. Displaying the Playing/Remaining Time and Play Information

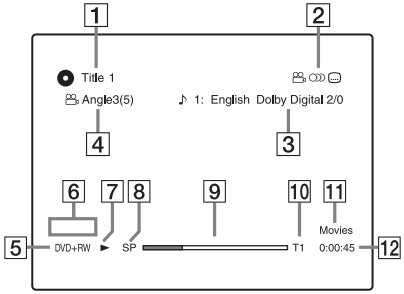
+RW -RWVR -RWVideo +R -RVR
-RVideo DVD VCD CD DATA CD

You can check the playing time and remaining time of the current title, chapter, track, or disc. Also, you can check the disc name recorded on the DVD/CD.



Press DISPLAY.

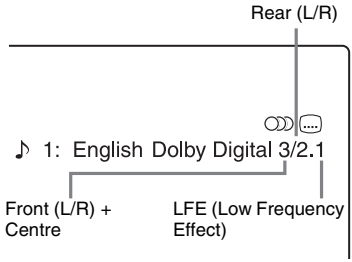
The displays differ depending on the disc type or playing status.



1 Title number/name
(Shows either track number, track name, or scene number for CDs, VIDEO CDs, or DATA CDs.)

2 Available functions for DVD VIDEOs (angle/audio/subtitle, etc.), or playback data for DATA CDs

3 The current selected function or audio setting (appears only temporarily)
Example: Dolby Digital 5.1 ch



4 The current selected angle

5 Disc type*1/format (page 7)

6 Title type (only appears for Playlists)

7 Play mode

8 Recording mode (page 36)

9 Playing status bar*2

10 Title number (chapter number*3) (page 50)
(Shows either track number, scene number, or album number*3 for CDs, VIDEO CDs, or DATA CDs.)

11 Album name appears for DATA CDs. For CDs with CD text, press TIME/TEXT.

12 Playing time (remaining time*3)

*1 Displays Super VIDEO CDs as "SVCD" and DATA CDs as "CD."
*2 Does not appear with VIDEO CDs and DATA CDs.
*3 Displayed when you press TIME/TEXT repeatedly.

Hints

- If "DTS" is set to "Off" in the "Audio" setup, the DTS track selection option will not appear on the screen even if the disc contains DTS tracks (page 64).
- When "Auto Display" is set to "On" (default) in the "Video" setup (page 63), information automatically appears on the screen when the recorder is operated.

Note
Playing time of MP3 audio tracks may not be displayed correctly.

Checking the playing/ remaining time

You can view the playing or time information displayed on the front panel display.

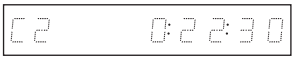
Press TIME/TEXT repeatedly.
The displays differ depending on the disc type or playing status.

Example: When playing a DVD

Playing time and number of the current title

Remaining time of the current title

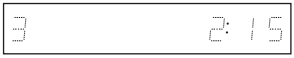
Playing time and number of the current chapter



Remaining time of the current chapter

Example: When playing a VIDEO CD

Playing time and number of the current scene or track



Example: When playing a CD

Track playing time and the current track/index number

↓

Remaining time of the current track

↓

Playing time of the disc

↓

Remaining time of the disc

↓

CD text (when available)

Example: When playing an MP3 audio track

Playing time and number of the current track

↓

Current album number

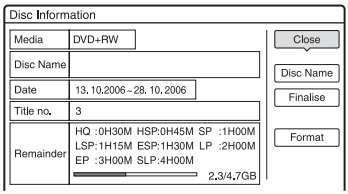
Notes
- The recorder can only display the first level of a CD's text, such as the disc name.
- The letters or symbols that cannot be displayed are replaced with "*."
- Playing time of MP3 audio tracks may not be displayed correctly.

Checking the remaining disc space

You can check the remaining disc space using the "Disc Information" display.

1 Insert a disc.
See "1. Inserting a Disc" on page 26.

2 Press OPTIONS to select "Disc Information," and press ENTER.
The "Disc Information" display appears. Available settings differ depending on the disc type.
Example: When a DVD+RW is inserted.



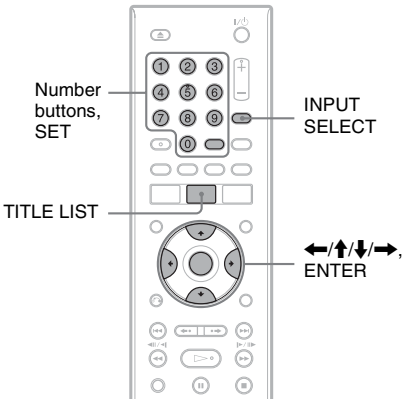
"Remainder" (approximate)
- The remaining recording time in each of the recording modes
- Disc space bar
- Remaining disc space/total disc space

Hint
To increase disc space, see "To open up disc space" (page 54).

5. Changing the Name of a Recorded Programme

+RW +R

You can label a DVD, title, or programme by entering characters. You can enter up to 64 characters for a title or disc name, but the actual number of characters displayed in the menus such as the Title List will vary. The steps below explain how to change the name of the recorded programme.



1 **Press TITLE LIST.**

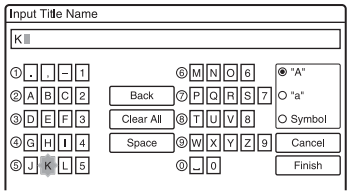
2 **Select a title, and press ENTER.**
The sub-menu appears.

3 **Select “Title Name,” and press ENTER.**
The display for entering characters appears.

4 **Press ←/↑/↓/→ to move the cursor to the right of the display and select “A” (upper-case), “a” (lower-case), or “Symbol,” and press ENTER.**
The characters for the selected type are displayed.

5 **Press ←/↑/↓/→ to select the character you want to enter, and press ENTER.**
The selected character appears at the top of the display.

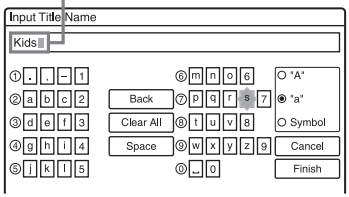
Example: Input Title Name



The type of characters will change according to the language you select in “Easy Setup.” Some languages allow you to enter an accent mark.
To enter a letter with an accent mark, select an accent followed by the letter.
Example: Select “ ` ” and then “a” to enter “à.”
To insert a space, select “Space.”

6 **Repeat steps 4 and 5 to enter the remaining characters.**

Input row



To erase a character, move the cursor to the right of the character at the input row. Select “Back” and press ENTER.
To insert a character, move the cursor to the right of the point where you want to insert the character. Select the character and press ENTER.
To erase all of the characters, select “Clear All” and press ENTER.

7 **Select “Finish,” and press ENTER.**
To cancel the setting, select “Cancel.”

To use the number buttons

You can also use the number buttons to enter characters. Refer to the number next to each row of letters on your TV screen.

1 In step 5 above, press a number button repeatedly to select a character.
Example:
Press the number 3 button once to enter "D."
Press the number 3 button three times to enter "F."

2 Press ENTER or SET and select the next character.

3 Select "Finish" and press ENTER.

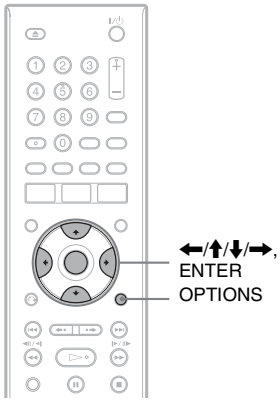
Hint

You can switch between "A" (upper-case), "a" (lower-case), or "Symbol" by pressing INPUT SELECT.

6. Labelling a Disc

+RW +R

You can execute options effective for the entire disc using the "Disc Information" display.

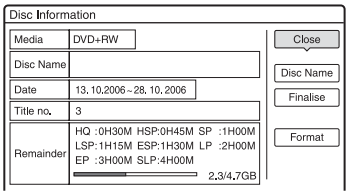


1 Insert a disc.

See "1. Inserting a Disc" on page 26.

2 Press OPTIONS to select "Disc Information," and press ENTER.

The "Disc Information" display appears. Available settings differ depending on the disc type.
Example: When the inserted disc is a DVD+RW.



3 Select "Disc Name," and press ENTER.

Enter the disc name in the "Input Disc Name" display (page 32).

Note

You can enter up to 64 characters for a DVD's disc name. The disc name may not appear when the disc is played on other DVD equipment.

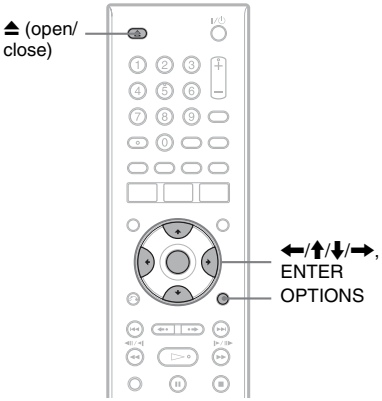
7. Playing the Disc on Other DVD Equipment (Finalise)

+RW +R

Finalising is necessary when you play discs recorded with this recorder on other DVD equipment.
When you finalise a DVD+RW or DVD+R, a DVD menu will be automatically created, which can be displayed on other DVD equipment.
Before finalising, check the differences between the disc types in the table below.

Differences between the disc types

+RW	Discs are automatically finalised when removed from the recorder. However, you may need to finalise the disc for certain DVD equipment, or if the recording time is short. You can edit or record on the disc even after finalising.
+R	Finalising is necessary when playing on any equipment other than this recorder. After finalising, you cannot edit or record on the disc.



Finalising the disc using ⏏ (open/close) button

1 **Make a recording.**
See “2. Recording a Programme” on page 26.

2 **Press ⏏ (open/close).**
The display shows the approximate time required for finalising and asks for confirmation.
For DVD+RWs, the recorder automatically starts finalising the disc. After finalising, the disc will be ejected automatically.

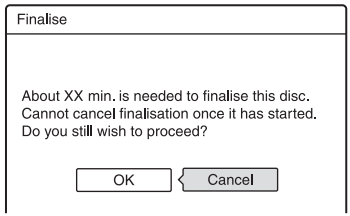
3 **Select “OK,” and press ENTER.**
The recorder starts finalising the disc. After finalising, the disc will be ejected automatically.

Finalising the disc using “Disc Information” display

1 **Insert a disc.**
See “1. Inserting a Disc” on page 26.

2 **Press OPTIONS to select “Disc Information,” and press ENTER.**
The “Disc Information” display appears.

3 **Select “Finalise,” and press ENTER.**
The display shows the approximate time required for finalising and asks for confirmation.


Finalise
About XX min. is needed to finalise this disc.
Cannot cancel finalisation once it has started.
Do you still wish to proceed?
OK
Cancel

4 **Select “OK,” and press ENTER.**
The recorder starts finalising the disc.

Hint

You can check whether the disc has been finalised or not. If you cannot select “Finalise” in step 3 above, the disc has already been finalised.

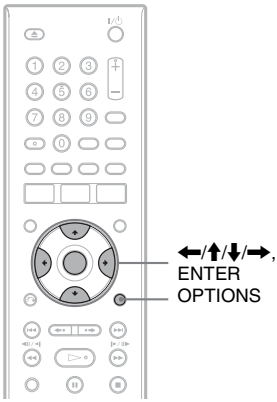
Notes

- Depending on the condition of the disc, recording, or the DVD equipment, discs may not play even if the discs are finalised.
- The recorder may not be able to finalise the disc if it was recorded on another recorder.

8. Reformatting a disc

+RW

New discs are automatically formatted when inserted. If necessary, you can manually re-format a DVD+RW disc to make a blank disc.

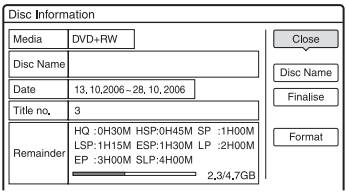


1 Insert a disc.

See “1. Inserting a Disc” on page 26.

2 Press OPTIONS to select “Disc Information,” and press ENTER.

Example: When a DVD+RW is inserted.



3 Select “Format,” and press ENTER.

4 Select “OK,” and press ENTER.

All contents on the disc are erased.

Note

On this model, 1 GB (read “gigabyte”) is equivalent to 1 billion bytes. The larger the number, the larger the disc space.

Before Recording

Before you start recording…

- Check that the disc has enough available space for the recording (page 31). For DVD+RWs, you can free up disc space by erasing titles (page 54).
- Adjust the recording picture quality and picture size if necessary (page 41).

Hint

Timer recordings will be made regardless whether or not the recorder is turned on. You can turn off the recorder without affecting the recording even after recording starts.

Note

To play a recorded disc on other DVD equipment, finalise the disc (page 34).

Recording mode

Like the standard ×3 recording modes of video tapes, you can select the desired recording mode using the REC MODE button.
Recording modes with higher quality provide a more beautiful recording, but the large data volume also results in a shorter recording time.
Conversely, a longer duration provides a longer recording time, but the lower data volume results in a coarser picture quality.

Press REC MODE repeatedly to switch the recording modes.

Recording mode	Approx. recording time (hours)	
	DVD	DVD+R DL
HQ (High quality)	1	1 hr. 48 min.
HSP ↑	1 hr. 30 min.	2 hr. 42 min.
SP (Standard mode)	2	3 hr. 37 min.
LSP ↓	2 hr. 30 min.	4 hr. 31 min.
ESP ↓	3	5 hr. 25 min.
LP ↓	4	7 hr. 14 min.
EP ↓	6	10 hr. 51 min.
SLP (Long duration)	8	14 hr. 28 min.

Notes

- The maximum continuous recording time for a single title is eight hours.
- Situations below may cause slight inaccuracies with the recording time.
  – Recording a programme with poor reception, or a programme or video source of low picture quality
  – Recording on a disc that has already been edited
  – Recording only a still picture or just sound

Recording stereo and bilingual programmes

The recorder automatically receives and records stereo and bilingual programmes based on the ZWEITON system or the NICAM system.

A DVD+RW or DVD+R can record only one sound track (main or sub) at a time. Select the sound track using the Setup Display before recording starts. Set “Bilingual Recording” of the “DVD Rec. Settings” to “Main” (default) or “Sub” in the “Recording” setup (page 66).

ZWEITON (German stereo) system

When a stereo based programme is received, “Stereo” appears.
When a bilingual ZWEITON based programme is received, “Main,” “Sub,” or “Main/Sub” appears.

NICAM system

When a stereo or bilingual NICAM based programme is received, “NICAM” appears in the front panel display.
To record a NICAM programme, be sure to set “Audio” of “Channel Setting” in the “Basic” setup to “NICAM” (default). If the sound is not clear when listening to NICAM broadcasts, set “Audio” to “Standard” (see “Channel Setting” on page 57).

Hint

You can select the audio (main or sub) while recording bilingual programmes using the AUDIO button. This does not affect the recorded sound.

Unrecordable pictures

Pictures with copy protection cannot be recorded on this recorder.
When the recorder receives a copy guard signal, the recorder continues to record but only a blank, grey coloured screen will be recorded.

Copy control signals	Recordable discs
Copy-Free	+RW +R
Copy-Once	None (a blank screen is recorded)
Copy-Never	None (a blank screen is recorded)

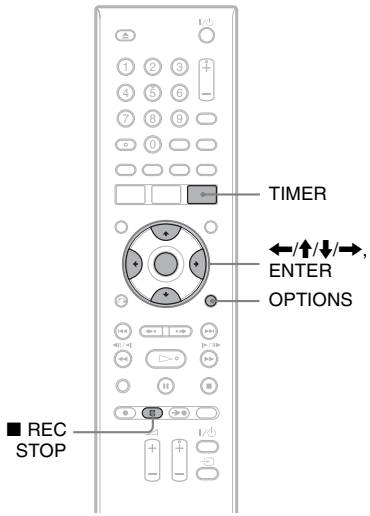
Timer Recording (Standard/VIDEO Plus+)

+RW +R

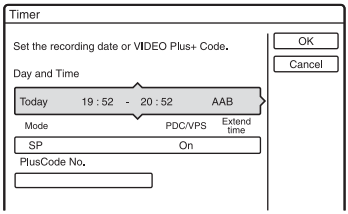
You can set the timer for a total of 40 programmes (8 programmes when using the PDC/VPS function), up to 30 days in advance.
There are two methods to set the timer: the standard method and VIDEO Plus+ method.

- Standard: Set the date, time, and programme position of the programme manually.
- VIDEO Plus+: Enter the PlusCode programming number designated for each TV programme (page 40).

Setting the timer manually (Standard)



1 **Press TIMER.**



2 **Press ↑/↓ to select the "Day and Time," "Mode," or PlusCode row. Then press ENTER.**

3 **Select an item using ←/→ and adjust using ↑/↓. Then press ENTER.**

To make additional changes to items in different rows, return to step 2. The adjustable items are listed below.

"Day and Time":

Sets the date, start time, and stop time, and selects the programme position or input source.

The date item changes as follows:

Today ↔ …… ↔ Sat 28.10 (30 days later) ↔ Sun (every Sunday) ↔ …… ↔ Sat (every Saturday) ↔ Mon - Fri (Monday to Friday) ↔ Mon - Sat (Monday to Saturday) ↔ Daily ↔ Today

"Mode":

Selects the recording mode (page 36).

"PDC/VPS":

Sets the PDC/VPS function. See "About the PDC/VPS function" below.

"Extend Time":

Sets the duration in increments of 10 minutes, for a maximum of 60 minutes when a timer recording is in progress. If the programme set to be recorded daily or weekly is extended, the manually extended time set here will be added to the subsequent timer recording times.

Note that when "PDC/VPS" is set to "On," you cannot make the "Extend Time" setting.

- If you make a mistake, select the item and change the setting.

4 **Select "OK," and press ENTER.**

The "TIMER LIST" display (page 42) appears. The TIMER REC indicator lights up on the front panel and the recorder is ready to start recording. Unlike a VCR, there is no need to turn off the recorder before the timer recording starts.

To stop recording during timer recording

Press ■ REC STOP.

Note that it may take a few seconds for the recorder to stop recording.

About the PDC/VPS function

PDC/VPS signals are transmitted with TV programmes in some broadcast systems. These signals ensure that timer recordings are made regardless of any broadcast delays, early starts, or broadcast interruptions.

◆ To use the PDC/VPS function

Set "PDC/VPS" to "On" in step 2 above. When you turn on this function, the recorder starts scanning the channels before the timer recording starts. If you are watching TV when scanning starts, a message will appear on the TV screen. If you want to watch TV, switch to your TV's tuner or turn off the PDC/VPS channel scan function.

Note that if you turn off the PDC/VPS channel scan function, the timer recording will not start.

◆ To temporarily turn off PDC/VPS channel scan

Press OPTIONS and select "PDC/VPS Scan Off."

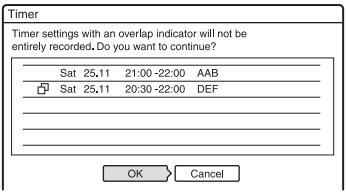
To ensure that the PDC/VPS function works properly, turn off the recorder before the timer recording starts. This will automatically turn on the PDC/VPS channel scan function while the recorder remains off.

Rec Mode Adjust

If there is not enough available disc space for the recording, the recorder automatically adjusts the recording mode to enable the entire programme to be recorded. Set "Rec Mode Adjust" of the "Timer Settings" to "On" in the "Recording" setup (page 66).

If the timer settings overlap

Overlapped timer settings are shown as follows.


Timer
Timer settings with an overlap indicator will not be entirely recorded. Do you want to continue?
Sat 25.11 21:00 -22:00 AAB
Sat 25.11 20:30 -22:00 DEF
OK
Cancel

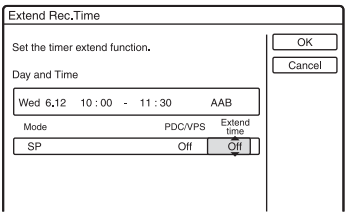
To store the setting as shown, select "OK." The programme that does not have a ⧉ mark next to it has priority and the overlapped programmes start recording only after the first programme has finished.
To cancel the overlapped setting, select "Cancel."

To confirm, change, or cancel a timer recording

See "Checking/Changing/Cancelling Timer Settings (Timer List)" on page 42.

To extend the recording duration time while recording

1 Press OPTIONS during recording to select "Extend Rec," and press ENTER.



2 Press ↑/↓ to select the duration time. You can set the duration in increments of 10 minutes, for a maximum of 60 minutes.

3 Select "OK" and press ENTER.

One Touch Timer

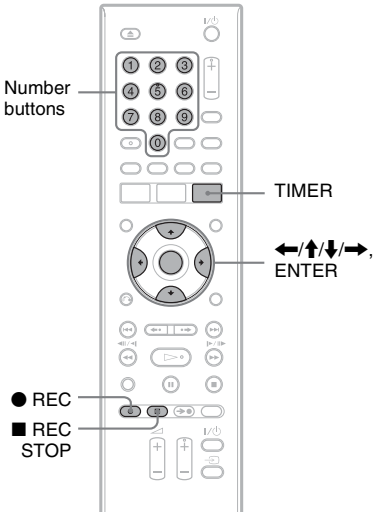
If you use the SMARTLINK connection, you can easily display the timer programming menu.
When the TV is turned on or in standby mode, press TIMER. The recorder automatically turns on and the TV's input is switched to the recorder. The Timer programming menu appears.

Notes

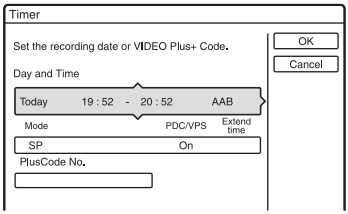
- If a message indicating that the disc is full appears on the screen, change the disc, or make available space for the recording (DVD+RW only) (page 55).
- Check that the clock is correctly set before setting the timer recording. If not, the timer recording cannot be made.
  To record a satellite programme, turn on the satellite tuner and select the satellite programme you want to record. Leave the satellite tuner turned on until the recorder finishes recording. If you connect equipment with a timer function, you can use the Synchro Rec function (page 44).
- Even if the timer is set for the same daily or weekly programme, the timer recording cannot be made if it overlaps with a programme that has priority. "⧉" will appear next to the overlapped setting in the Timer List. Check the priority order of the settings.
- Even if the timer is set, timer recordings cannot be made while recording a programme that has priority.
- The Rec Mode Adjust function only works with a timer recording and the PDC/VPS function set to off. It does not function with Quick Timer or Synchro Rec.
- The beginning of some recordings may not be made when using the PDC/VPS function.
- You cannot extend the recording duration time when "PDC/VPS" is set to "On."

Recording TV programmes using the VIDEO Plus+ system

The VIDEO Plus+ system is a feature that simplifies setting the timer. Just enter the PlusCode programming number listed in the TV programme guide. The date, time, and programme position of that programme are set automatically.
Check that the programme positions are correctly set in “Channel Setting” in the “Basic” setup (page 57).



1 Press TIMER.

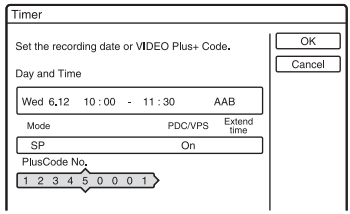


2 Select “PlusCode No.” using ↑/↓, and press ENTER.

3 Press the number buttons to enter the PlusCode programming number, and press ENTER.

The date, start and stop times, programme position, recording mode, etc. setting (page 38) appear.

- If you make a mistake before pressing ENTER, press ←/→ and re-enter the correct number.



- If you want to change the setting, press ←/→ to select the item and press ↑/↓ to change the setting.
- If you want to re-enter the PlusCode programming number, select “PlusCode No.,” and press ENTER. Then re-enter the PlusCode programming number.

4 Select “OK,” and press ENTER.

The TIMER REC indicator lights up on the front panel, and the recorder is ready to start recording.

To stop recording during timer recording

Press ■ REC STOP.
Note that it may take a few seconds for the recorder to stop recording.

If the timer settings overlap

See page 39.

To extend the recording duration time while recording

See page 39.

To confirm, change, or cancel a timer recording

See “Checking/Changing/Cancelling Timer Settings (Timer List)” on page 42.

Hint

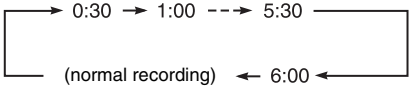
The Rec Mode Adjust function also works with this timer method (page 38).

Using the Quick Timer function

You can set the recorder to record in 30 minute increments.

Press ● REC repeatedly to set the duration.

Each press advances the time in 30 minute increments. The maximum duration is six hours.



The time counter decreases minute by minute to 0:00, then the recorder stops recording (the power does not turn off). Even if you turn off the recorder during recording, the recorder continues to record until the time counter runs out.

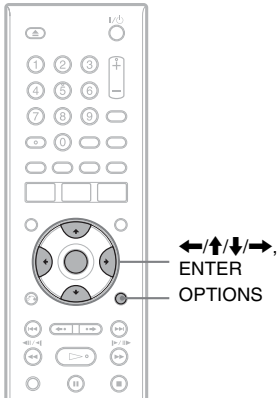
Note that the Quick Timer function does not work if "TV Direct Rec" is set to "On" in the "Recording" setup (page 66).

To cancel the Quick Timer

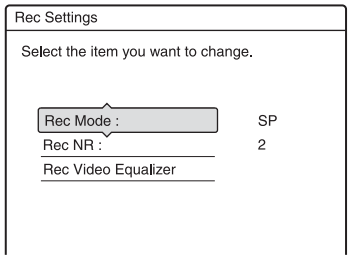
Press ● REC repeatedly until the counter appears in the front panel display. The recorder returns to normal recording mode.

Adjusting the recording picture quality and size

You can adjust the recording picture quality and picture size.



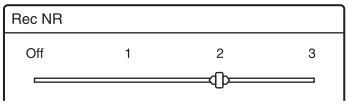
1 **Before recording starts, press OPTIONS to select "Rec Settings," and press ENTER.**



2 **Select the item you want to adjust, and press ENTER.**

The adjustment display appears.

Example: Rec NR



"Rec Mode":
Selects the recording mode for the desired recording time and picture quality. For more information, see "Recording mode" on page 36.

➡continued

"Rec NR" (noise reduction): Reduces noise contained in the video signal.

"Rec Video Equalizer": Adjusts the picture in greater detail.
Press ↑/↓ to select the item you want to adjust, then press ENTER.
- Contrast: Changes the contrast.
- Brightness: Changes the overall brightness.
- Colour: Makes the colours deeper or lighter.

3 Adjust the setting using ←/↑/↓/→, and press ENTER.

The default setting is underlined.
"Rec NR": (weak) Off 1 ~ 2 ~ 3 (strong)
"Rec Video Equalizer":
- Contrast: (weak) –3 ~ 0 ~ 3 (strong)
- Brightness: (dark) –3 ~ 0 ~ 3 (bright)
- Colour: (light) –3 ~ 0 ~ 3 (deep)

Repeat steps 2 and 3 to adjust any other items.

Notes
- The recorded picture size is fixed at 4:3.
- Remnants of images may appear on your screen when using "Rec NR."
- "Rec Video Equalizer" does not work with RGB signals.

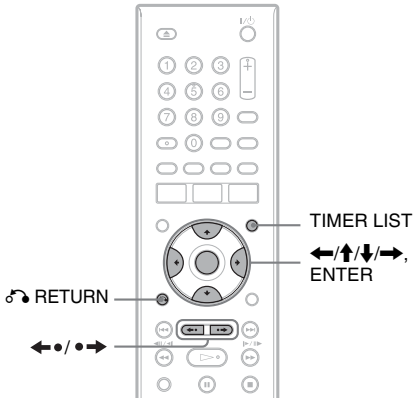
Creating chapters in a title

The recorder can automatically divide a recording (a title) into chapters by inserting chapter marks at approximately 6 minute intervals during recording. To disable this function, set "Auto Chapter" in the "Recording" setup to "Off" (page 66).

Checking/Changing/ Cancelling Timer Settings (Timer List)

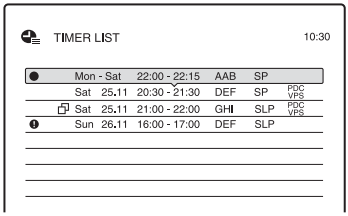
+RW +R

You can check, change, or cancel timer settings using the Timer List.



1 Press TIMER LIST.

The Timer List appears.


TIMER LIST
10:30
Mon - Sat 22:00 - 22:15 AAB SP
Sat 25.11 20:30 - 21:30 DEF SP PDC VPS
Sat 25.11 21:00 - 22:00 GHI SLP PDC VPS
Sun 26.11 16:00 - 17:00 DEF SLP

Timer information displays the recording date, time, recording mode, etc.
⧉:
Indicates that the setting is overlapped by another setting.
● (red):
Indicates the setting is currently being recorded.
❗:
Indicates that the timer recording cannot be recorded as set, such as for a timer recording that cannot be recorded in the selected Rec mode.

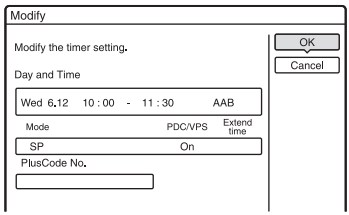
When all of the timer settings do not fit on the list, the scroll bar appears.
To view the hidden timer settings, press ↑/↓.

2 Select the timer setting you want to check/change/cancel, and press ENTER.

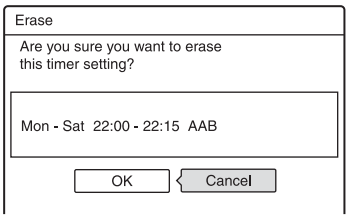
The sub-menu appears.

3 Select one of the options, and press ENTER.

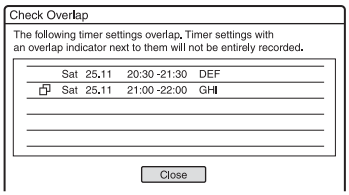
"Modify":
Changes the timer setting.
Select an item using ←/→ and adjust using ↑/↓. Select "OK," and press ENTER.



"Erase":
Erases the timer setting. Select "OK," and press ENTER.



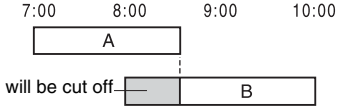
"Check Overlap":
Checks for overlapped settings.
The timer setting without the ⧉ mark has priority over the other settings.


Check Overlap
The following timer settings overlap. Timer settings with an overlap indicator next to them will not be entirely recorded.
Sat 25.11 20:30 -21:30 DEF
Sat 25.11 21:00 -22:00 GHI
Close

Select "Close" to return to the Timer List.
To change or cancel the setting, repeat steps 2 and 3 above.

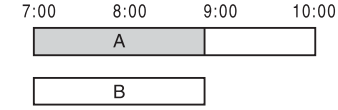
When the timer settings overlap

The programme that starts first has priority and the second programme starts recording only after the first programme has finished.



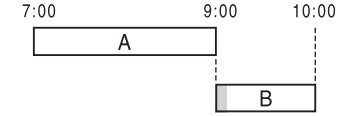
◆ When the recordings start at the same time

The programme that is set last has priority. In this example, timer setting B is set after A, so the first part of timer setting A will not be recorded.



◆ When the end time of one recording and the start time of another are the same

After finishing the previous recording, the other recording may be delayed.



To scroll the list display by page (Page mode)

Press ←•/•→ while the list display is turned on. Each time you press ←•/•→, the entire Timer List changes to the next/previous page of timer settings.

To turn off the Timer List

Press TIMER LIST or ↩ RETURN.

Hint

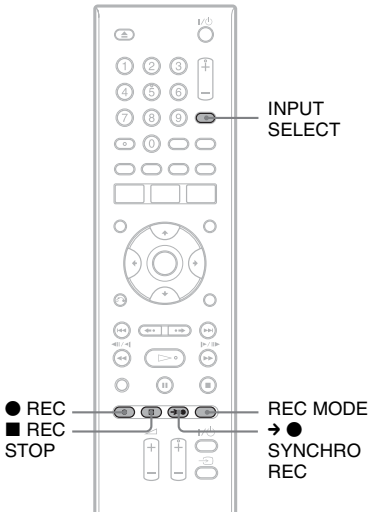
While recording, you cannot modify the timer setting for the current recording, but you can extend the duration of the recording time (page 39).

Notes

- When "PDC/VPS" is set to "On" for one or more timer recordings, the start times may change in the event of a broadcast delay or early start.
- Even if the timer is set, timer recordings cannot be made while recording a programme that has priority.
- Even if the timer is set for the same daily or weekly programme, the timer recording cannot be made if it overlaps with a programme that has priority. "⧉" will appear next to the overlapped setting in the Timer List. Check the priority order of the settings.

Recording From Connected Equipment

+RW +R



Recording from connected equipment with a timer (Synchro Rec)

You can set the recorder to automatically record programmes from connected equipment that has a timer function (such as a satellite tuner). Connect the equipment to the LINE 3/DECODER jack of the recorder (page 21).
When the connected equipment turns on, the recorder starts recording a programme from the LINE 3/DECODER jack.

1 Insert a recordable DVD.
See "1. Inserting a Disc" on page 26.

2 Press INPUT SELECT repeatedly to select "L3."

3 Press REC MODE repeatedly to select the recording mode.
For details about the recording mode, see page 36.

4 Set the timer on the connected equipment to the time of the programme you want to record, and turn it off.

5 Press → ● SYNCHRO REC.
The SYNCHRO REC indicator lights up on the front panel. The recorder is ready to start Synchro-Recording.
The recorder automatically starts recording when it receives an input signal from the connected equipment. The recorder stops recording when the connected equipment turns off.

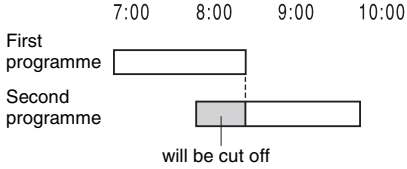
To stop recording
Press ■ REC STOP or → ● SYNCHRO REC.

To cancel Synchro Rec
Press → ● SYNCHRO REC.
The SYNCHRO REC indicator on the recorder turns off.

Notes
- The recorder starts recording only after detecting a video signal from the connected equipment. The beginning of the programme may not be recorded regardless of whether or not the recorder's power is on or off.
- During Synchro-Recording, other operations, such as normal recording, cannot be performed.
- To use the connected equipment while the recorder is standing by for Synchro-Recording, cancel Synchro-Recording by pressing → ● SYNCHRO REC. Be sure to turn off the connected equipment and press → ● SYNCHRO REC to reset Synchro-Recording before the timer recording starts.
- The Synchro Rec function does not work when "Line3 Input" of "Scart Setting" is set to "Decoder" in the "Video" setup (page 63).
- The Synchro Rec function does not work with some tuners. For details, see the tuner's operating instructions.
- While the recorder is standing by for Synchro-Recording, the Auto Clock Set function (page 60) does not work.
- To use the Synchro Rec function, you must first set the recorder's clock correctly.

If the timer settings of a Synchro-Recording and another timer recording overlap

Regardless of whether or not the programme is a Synchro Rec programme, the programme that starts first has priority and the second programme starts recording only after the first programme has finished.



Recording from connected equipment without a timer

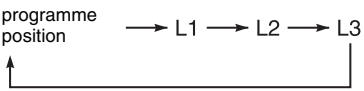
You can record from a connected VCR or similar device. To connect a VCR or similar device, see "Connecting a VCR or Similar Device" on page 19.

1 Insert a recordable DVD.

See "1. Inserting a Disc" on page 26.

2 Press INPUT SELECT to select an input source according to the connection you made.

The front panel display changes as follows:



3 Press REC MODE repeatedly to select the recording mode.

For details about the recording mode, see page 36.

4 Insert the source tape into the connected equipment and set to playback pause.

5 Press ● REC.

This recorder starts recording.

6 Press the pause (or play) button on the connected equipment to cancel the playback pause status.

The connected equipment starts playback and the playback image is recorded by this recorder.

To stop recording, press ■ REC STOP on this recorder.

Hint

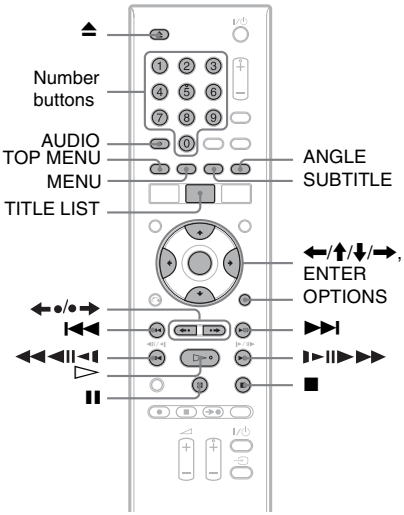
You can adjust the settings for the recording picture before recording. See "Adjusting the recording picture quality and size" on page 41.

Notes

- When recording a video game image, the screen may not be clear.
- Any programme that contains a Copy-Never copy guard signal cannot be recorded. The recorder continues to record, but a blank screen will be recorded.

Playing

+RW -RWVR -RWVideo +R -RVR
-RVideo DVD VCD CD DATA CD

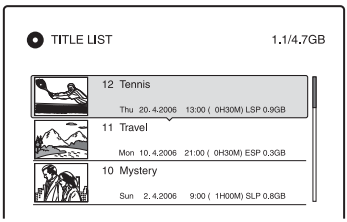


1 Insert a disc.

- See "1. Inserting a Disc" on page 26.
- If you insert a DVD VIDEO, VIDEO CD, or CD, press ▷. Playback starts.

2 Press TITLE LIST.

For details about the Title List, see "3. Playing the Recorded Programme (Title List)" on page 28.
Example: DVD+RW



3 Select the title, and press ENTER.

The sub-menu appears.

4 Select "Play," and press ENTER.

Playback starts from the selected title.

To use the DVD's Menu

When you play a DVD VIDEO, or a finalised DVD+RW, DVD-RW (Video mode), DVD+R, or DVD-R (Video mode), you can display the disc's menu by pressing TOP MENU or MENU.

To play VIDEO CDs with PBC functions

PBC (Playback Control) allows you to play VIDEO CDs interactively using the menu on your TV screen.
When you start playing a VIDEO CD with PBC functions, the menu appears.
Select an item using the number buttons and press ENTER. Then, follow the instructions in the menu (press ▷ when "Press SELECT" appears).
The PBC function of Super VIDEO CDs does not work with this recorder. Super VIDEO CDs are played in continuous play mode only.

To change the angles

If various angles (multi-angles) for a scene are recorded on the disc, "" appears in the front panel display. Press OPTIONS during playback to select "Change Angle," and press ENTER.

To stop playback

Press ■.

To resume playback from the point where you stopped (Resume Play)

When you press ▷ again after you stop playback, the recorder resumes playback from the point where you pressed ■.
To start from the beginning, press OPTIONS to select "Play Beginning," and press ENTER. Playback starts from the beginning of the title/track/scene.

The point where you stopped playing is cleared when:
– you open the disc tray.
– you play another title.
– you switch the Title List menu to Original or Playlist (DVD-RWs/DVD-Rs in VR mode only).
– you edit the title after stopping playback.
– you change the settings on the recorder.
– you turn off the recorder (VIDEO CD/CD/DATA CD only).
– you make a recording.
– you disconnect the mains lead.

To play restricted DVDs (Parental Control)

If you play a restricted DVD, the message "Do you want to temporarily change the Parental Control level to * ?" appears on your TV screen.

1 Select "OK" and press ENTER.
The display for entering your password appears.

2 Enter your four-digit password using the number buttons.

3 Press ENTER to select "OK."
The recorder starts playback.

To register or change the password, see "Parental Control (DVD VIDEO only)" on page 67.

To lock the disc tray (Child Lock)

You can lock the disc tray to prevent children from ejecting the disc.
When the recorder is turned on, hold down ■ until "LOCKED" appears in the front panel display. The ⏏ (open/close) button does not work while the Child Lock is set.

To unlock the disc tray, hold down ■ until "UNLOCKED" appears in the front panel display when the recorder is turned on.

One Touch Play

If you use the SMARTLINK connection, you can easily start playing.
Press ▷. The recorder and your TV automatically turn on and the TV's input is switched to the recorder. Playback starts automatically.

One Touch Menu

If you use the SMARTLINK connection, you can easily display the Title List.
Press TITLE LIST. The recorder and your TV automatically turn on and the TV's input is switched to the recorder. The Title List appears.

Hints

- You can also use the ▷ button in step 3 (page 46) to start playback.
- Even if you select "Factory Setup" in the "Others" setup (page 69), the Child Lock remains set.

Playback options

To check the position of the buttons below, see the illustration on page 46.
For MP3 operations, see "Playing MP3 Audio Tracks" on page 51.

Buttons	Operations
AUDIO -RW VR -R VR DVD VCD CD	Selects one of the audio tracks recorded on the disc when pressed repeatedly in normal playback mode. DVD : Selects the language. -RW VR -R VR : Selects the main or sub sound. VCD CD : Selects stereo or monaural audio tracks.
SUBTITLE DVD	Selects a subtitle language when pressed repeatedly.
ANGLE DVD	Selects an angle when pressed repeatedly in normal playback mode. If various angles (multi-angles) for a scene are recorded on the disc, " " appears in the front panel display.
←•/•→ (instant replay/ instant advance) +RW -RW VR -RW Video +R -R VR -R Video DVD	Replays the scene/briefly fast forwards the scene.
I◄◄ (previous)/►►I (next)	Goes to the beginning of the previous/next title/chapter/scene/ track.
◄◄ ◄II ◄◖/◗► II► ►► (fast reverse/fast forward)	Fast reverses/fast forwards the disc when pressed during playback. Search speed changes as follows: fast reverse ◄◄1 ← ◄◄2 ← ← ◄◄3* ← ← ← fast forward → 1►► → → 2►► → → → 3►►* When you press and hold the button, fast forward/fast reverse continues at the selected speed until you release the button. * ◄◄3 and 3►► are only available for DVDs.
◄◄ ◄II ◄◖/◗► II► ►► (slow, freeze frame) +RW -RW VR -RW Video +R -R VR -R Video DVD VCD * * Playback direction only	Plays in slow motion when pressed for more than one second in pause mode. Plays one frame at a time when pressed briefly in pause mode.
II (pause)	Pauses playback.

To resume normal playback, press ▷.

Notes

- Angles and subtitles cannot be changed with titles recorded on this recorder.
- Slideshows made with a DVD camcorder can only be played. Other play functions, such as fast forward, cannot be used.

Notes on playing DTS sound tracks on a CD

- When playing DTS-encoded CDs, excessive noise will be heard from the analogue stereo jacks. To avoid possible damage to the audio system, the consumer should take proper precautions when the analogue stereo jacks of the recorder are connected to an amplification system. To enjoy DTS Digital Surround™ playback, an external DTS decoder must be connected to the DIGITAL OUT jack of the recorder.
- Set the sound to "Stereo" using the AUDIO button when you play DTS sound tracks on a CD (page 48).

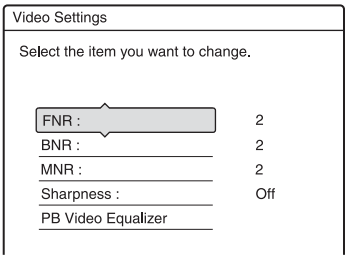
Notes on playing DVDs with a DTS sound track

DTS audio signals are output only through the DIGITAL OUT (COAXIAL) jack.
When you play a DVD with DTS sound tracks, set "DTS" to "On" in the "Audio" setup (page 64).

Adjusting the picture quality

+RW -RWVR -RWVideo +R -RVR -RVideo DVD VCD

1 Press OPTIONS during playback to select "Video Settings," and press ENTER.



2 Select an item, and press ENTER.

The adjustment display appears.
"FNR" (frame noise reduction):
Reduces noise contained in the luminance element of the video signal.
"BNR" (block noise reduction):
Reduces "block noise" or mosaic like patterns in the picture.
"MNR" (mosquito noise reduction):
Reduces the faint noise appearing around the outlines of the images. The noise reduction effects are automatically adjusted within each setting range according to the video bit rate and other factors.
"Sharpness":
Sharpens the outlines of the images.
"PB Video Equalizer" (Playback video equalizer):
Adjusts the picture in greater detail.
Select an item and press ENTER.

- Contrast: changes the contrast.
- Brightness: changes the overall brightness.
- Colour: makes the colours deeper or lighter.
- Hue: changes the colour balance.

3 Press ←/→ to adjust the setting, and press ENTER.

The default settings are underlined.
"FNR": (weak) Off 1 2 3 (strong)
"BNR": (weak) Off 1 2 3 (strong)
"MNR": (weak) Off 1 2 3 (strong)
"Sharpness"*: (weak) Off 1 2 3 (strong)
"PB Video Equalizer":

- Contrast: (weak) –3 ~ 0 ~ 3 (strong)
- Brightness: (dark) –3 ~ 0 ~ 3 (bright)
- Colour: (light) –3 ~ 0 ~ 3 (deep)
- Hue: (red) –3 ~ 0 ~ 3 (green)

Repeat steps 2 and 3 to adjust any other items.

* "1" softens the outlines of the images. "2" enhances the outlines and "3" enhances them more than "2."

→continued

Notes

- If the outlines of the images on your screen become blurred, set “BNR” and/or “MNR” to “Off.”
- Depending on the disc or the scene being played, the above BNR, MNR, or FNR effects may be hard to discern. And, these functions may not work with some screen sizes.
- When using the “Sharpness” function, noise found in the title may become more apparent. In this case, it is recommended that you use the BNR function with the “Sharpness” function. If the condition still does not improve, set the “Sharpness” level to “Off.”

Adjusting the delay between the picture and sound (AV SYNC)

+RW -RWVR -RWVideo +R -RVR -RVideo DVD VCD

1 Press OPTIONS during playback to select “Audio Settings,” and press ENTER.

2 Select “AV SYNC”, and press ENTER.

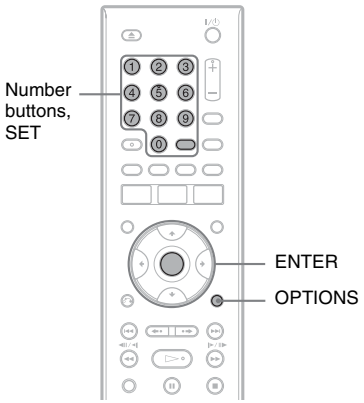
“AV SYNC”:
When the video is delayed, this function delays the audio for synchronization with the video (0 to 120 milliseconds). Larger numbers indicate a longer audio delay for synchronization with the video. When dubbing to a VCR or other video recording equipment, be sure to return this setting to 0 ms (default).

3 Press ←/→ to adjust the setting, and press ENTER.

Searching for a Title/ Chapter/Track, etc.

+RW -RWVR -RWVideo +R -RVR -RVideo DVD VCD CD DATA CD

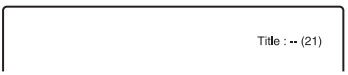
You can search a disc by title, chapter, scene or track. As titles and tracks are assigned individual numbers, select the title or track by entering its number. You can also search for a scene using the time code.



1 Press OPTIONS during playback to select a search method, and press ENTER.

“Title Search” (for DVDs)
“Chapter Search” (for DVDs)
“Track Search” (for CDs/DATA CDs)
“Search” (for VIDEO CDs)
“Album Search” (for DATA CDs)
“Time Search” (for DVDs): Searches for a starting point by entering the time code.

The display for entering the number appears.
Example: Title Search



The number in parentheses indicates the total number of titles, tracks, etc.

2 Press the number buttons to select the number of the title, chapter, track, time code, etc., you want.

For example: Time Search
To find a scene at 2 hours, 10 minutes, and 20 seconds, enter "21020."
If you make a mistake, select another number.

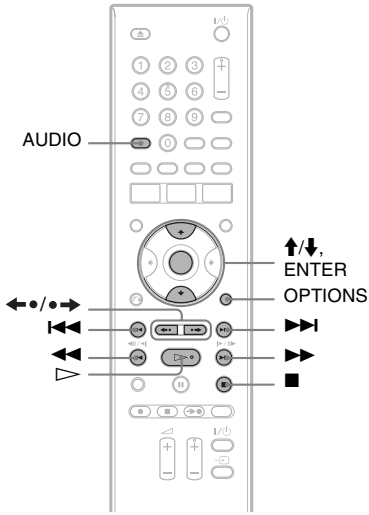
3 Press ENTER or SET.

The recorder starts playback from the selected number.

Playing MP3 Audio Tracks

DATA CD

You can play MP3 audio tracks on DATA CDs (CD-ROMs/CD-Rs/CD-RWs).



1 Insert a disc.

See "1. Inserting a Disc" on page 26.

2 Press ▷.

Playback starts from the first MP3 audio track on the disc.

To stop playback

Press ■.

To play the beginning of the track

Press OPTIONS to select "Play Beginning," and press ENTER.

To fast forward or review a track

Press ◀◀/▶▶ during playback.

To go to the next or previous MP3 audio track

Press ⏮ or ⏭ during playback. If you repeatedly press ⏮ or ⏭, you will go to the next or previous album.

To go to the next or previous album

Press ←•/•→ during playback.

Hint

Press the AUDIO button to switch between stereo or monaural audio tracks.

About MP3 audio tracks

MP3 is an audio compression technology that satisfies certain ISO/MPEG regulations.
You can play MP3 (MPEG1 Audio Layer 3) format audio tracks on DATA CDs (CD-ROMs/CD-Rs/CD-RWs).
DATA CDs must be recorded according to ISO9660 Level 1, Level 2 or Joliet format for the recorder to recognize the MP3 tracks.
You can also play discs recorded in MultiSession/Border.
See the instructions supplied with the disc drives and the recording software (not supplied) for details on the recording format.

Note on MultiSession discs

If audio tracks and images in Music CD format or Video CD format are recorded in the first session, only the first session will be played back.

Note

The recorder may not be able to play some DATA CDs created in the Packet Write format.

MP3 audio tracks that the recorder can play

The recorder can play the following tracks and files:
– MP3 audio tracks with the extension ".mp3."

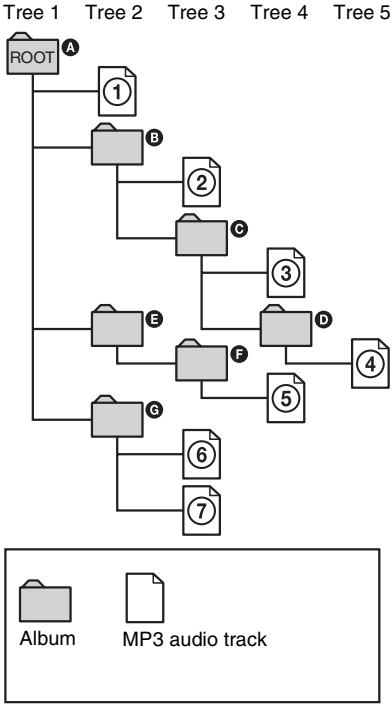
Notes

- The recorder will play any data with the extension ".mp3" even if they are not in MP3 format. Playing these data may generate a loud noise which could damage your speaker system.
- The recorder does not conform to audio tracks in mp3PRO format.
- Some files cannot be played.
- The letters that cannot be displayed are replaced with "*."

About playback order of albums and tracks

Albums play in the following order:

Structure of disc contents



When you insert a DATA CD and press ▷, the numbered tracks are played sequentially, from ① through ⑦. Any sub-albums/tracks contained within a currently selected album take priority over the next album in the same tree. (Example: ❸ contains ❹ so ④ is played before ⑤.)

Hints

- If you add numbers (01, 02, 03, etc.) to the front of the track names when you store the tracks in a disc, the tracks will be played in that order.
- Since a disc with many trees takes longer to start playback, it is recommended that you create albums with no more than two trees.

Notes

- Depending on the software you use to create the DATA CD, the playback order may differ from the above illustration.
- No more than a total of 999 individual folders can be played. (Folders that do not contain MP3 files are counted as well.)
- No more than a total of 999 folders and 9999 files can be played. (Files other than MP3 files, and folders that do not contain MP3 files are counted as well.)
- No more than 999 folders and files can be recognized in a single folder. (Folders that do not contain MP3 files are counted as well.)
- Proceeding to the next or another album may take some time.
- This recorder supports MP3 audio bit rates up to 320 kbps.

Before Editing

This recorder offers various edit options for various disc types.

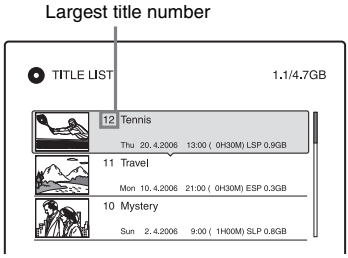
Notes

- You may lose the edited contents if you remove the disc or a timer recording starts while editing.
- DVD discs created by DVD video cameras cannot be edited on this recorder.
- If a message appears and indicates that the disc's control information is full, erase or edit unnecessary titles.
- When editing a DVD+R, finish all editing before finalising the disc. You cannot edit a finalised disc.

Edit features	+RW	+R
Erase (page 54)	Yes	Yes
Protect (page 54)	Yes	Yes
Title Name (page 54)	Yes	Yes
A-B Erase (page 55)	Yes	No
Erase Titles (page 55)	Yes	Yes

To open up disc space

To open up disc space on a DVD+RW, erase the title with the largest number in the title list.


Largest title number
TITLE LIST
1.1/4.7GB
12 Tennis
Thu 20. 4.2006 13:00 (0H30M) LSP 0.9GB
11 Travel
Mon 10. 4.2006 21:00 (0H30M) ESP 0.3GB
10 Mystery
Sun 2. 4.2006 9:00 (1H00M) SLP 0.8GB

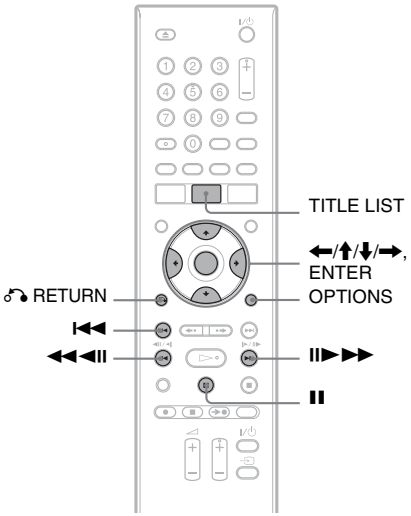
For DVD+Rs, the available disc space does not increase even if you erase titles.

See "Erasing and Editing a Title" on page 54 or "Erasing multiple titles (Erase Titles)" on page 55.

Erasing and Editing a Title

+RW +R

This section explains the basic edit functions. Note that editing is irreversible.



1 Press TITLE LIST.

2 Select a title, and press ENTER.

The sub-menu appears.

3 Select an option, and press ENTER.

You can make the following edits to the title.

"Erase": Erases the selected title. Select "OK" when asked for confirmation.

"Protect": Protects the title. "🔒" appears next to the protected title.

"Title Name": Allows you to enter or re-enter a title name (page 32).

"A-B Erase": Erases a section of the title (page 55).

Hints

- You can erase multiple titles at one time (page 55).
- You can label or re-label DVDs (page 33).

Erasing multiple titles (Erase Titles)

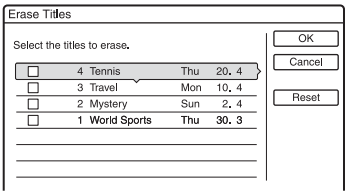
+RW +R

You can select and erase more than one title at one time using the OPTIONS menu.

1 Press TITLE LIST.

2 Press OPTIONS to select "Erase Titles," and press ENTER.

The display for selecting titles to be erased appears.



3 Select a title, and press ENTER.

A check mark appears in the check box next to the selected title.

- To clear the check mark, press ENTER again.
- To clear all of check marks, select "Reset."

4 Repeat step 3 to select all of the titles you want to erase.

5 When you finish selecting titles, select "OK," and press ENTER.

The list of the titles to be erased appears for confirmation.

- To change the selection, select "Change," and repeat from step 3.

6 Select "OK" and press ENTER.

The titles are erased.

To erase all titles on the disc

You can reformat a DVD+RW to make the disc blank.

See "8. Reformatting a disc" on page 35.

Erasing a section of a title (A-B Erase)

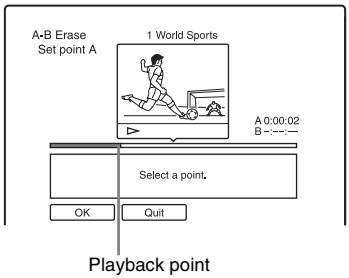
+RW

You can select a section (scene) in a title and erase it. Note that erasing scenes in a title cannot be undone.

1 After step 2 of "Erasing and Editing a Title," select "A-B Erase" and press ENTER.

The display for setting point A appears. The title starts to play.

- To return to the beginning of the title, press ❚❚ and then press ⏮.



Playback point

2 Select point A using ◀◀/▶▶, and press ENTER.

Playback pauses.

3 Press ENTER if point A is correct.

If point A is incorrect, select point A using ◀❚❚/❚❚▶, and press ENTER. The display for setting point B appears.

4 Select point B using ◀◀/▶▶, and press ENTER.

Playback pauses.

5 Press ENTER if point B is correct.

If point B is incorrect, select point B using ◀❚❚/❚❚▶, and press ENTER. The display asks for confirmation.

- To reset point A, press ↑ and ↩ RETURN, and go to step 2.
- To reset point B, press ↑ and repeat step 4.

6 Select "OK," and press ENTER.

The scene is erased. The display for setting point A appears.

- To continue, go to step 2.
- To finish, select "Quit."

➡continued

Hint

A chapter mark is inserted after the scene was erased. The chapter mark divides the title into separate chapters on either side of the mark.

Notes

- Images or sound may be momentarily interrupted at the point where you erase a section of a title.
- Sections shorter than five seconds may not be erased.
- The erased section may be slightly different from the points you selected.

Aerial Reception and Language Settings (Basic)

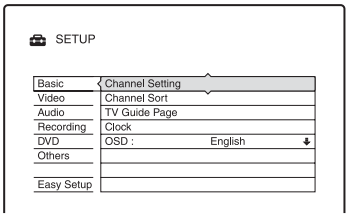
The “Basic” setup helps you to make tuner, clock, and programme position settings for the recorder.

1 Press SYSTEM MENU while the recorder is in stop mode.

2 Select “SETUP,” and press ENTER.

3 Select “Basic,” and press ENTER.

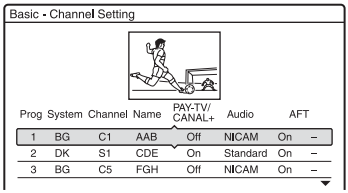
The options for “Basic” appear. The default settings are underlined.
To turn off the display, press SYSTEM MENU repeatedly.



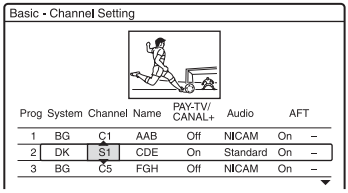
Channel Setting

Presets programme positions manually.
If some programme positions could not be set using the “Easy Setup” function, you can set them manually.
If there is no sound or if the picture is distorted, the wrong tuner system may have been preset during “Easy Setup.” Set the correct tuner system manually in the steps below.

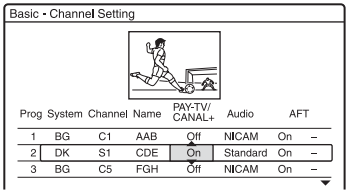
1 Select “Channel Setting” in “Basic,” and press ENTER.


Basic - Channel Setting
Prog System Channel Name PAY-TV/ CANAL+ Audio AFT
1 BG C1 AAB Off NICAM On –
2 DK S1 CDE On Standard On –
3 BG C5 FGH Off NICAM On –

2 Press ↑/↓ to select the programme position, and press ENTER.


Basic - Channel Setting
Prog System Channel Name PAY-TV/ CANAL+ Audio AFT
1 BG C1 AAB Off NICAM On –
2 DK S1 CDE On Standard On –
3 BG C5 FGH Off NICAM On –

3 Select the item you want to change using ←/→, and change the settings using ↑/↓ and press ENTER.


Basic - Channel Setting
Prog System Channel Name PAY-TV/ CANAL+ Audio AFT
1 BG C1 AAB Off NICAM On –
2 DK S1 CDE On Standard On –
3 BG C5 FGH Off NICAM On –

4 To preset another programme position, repeat from step 2.

System

Select an available TV system (page 58).

BG	Select this when in West European countries, except those listed in “Receivable channels” on page 58.
DK	Select this when in East European countries.
I	Select this when in Great Britain/Ireland.

→continued

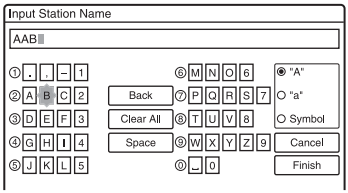
Channel

Press ↑/↓ repeatedly until the programme position you want is displayed.
The programme positions are scanned in the order shown in the table below.

- If you know the number of the programme position you want, press the number buttons. For example, for programme position 5, first press "0" and then press "5."
- To disable a programme position, enter "00." The disabled programme positions will be skipped when you press PROG +/–.
- To select a cable or satellite programme position, press ↑/↓ until the programme position you want is displayed.

Name

Changes or enters a new station name (up to 5 characters). The recorder must receive programme position information (for instance, SMARTLINK information) for station names to appear automatically.



To enter characters, see page 32.

PAY-TV/ CANAL+

Sets the PAY-TV/Canal Plus channels.
For details, see page 24.

Audio

Select "NICAM" or "Standard."

NICAM	Normally, select this.
Standard	Select this if the sound from NICAM broadcasts is not clear.

AFT

Select "On" to turn on AFT.

On	Turns on the Auto Fine Tuning function. Normally, select this.
Off	Allows you to adjust the pictures manually.

- If the Auto Fine Tuning function does not work effectively, select "Off" and press →. Press ↑/↓ to obtain a clearer picture, and press ←.

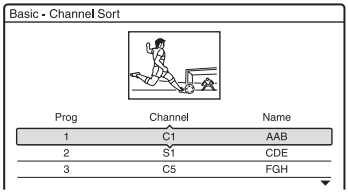
◆ Receivable channels

TV system	Channel coverage
BG (West European Countries, except those listed below)	E2 – E12 VHF
	Italia A – H VHF
	E21 – E69 UHF
	S1 – S20 CATV
	S21 – S41 HYPER
	S01 – S05 CATV
DK (East European Countries)	R1 – R12 VHF
	R21 – R69 UHF
	S1 – S20 CATV
	S21 – S41 HYPER
	S01 – S05 CATV
I (Great Britain/ Ireland)	Ireland A – J VHF
	South Africa 4 – 13 VHF
	B21 – B69 UHF
	S1 – S20 CATV
	S21 – S41 HYPER
	S01 – S05 CATV

Channel Sort

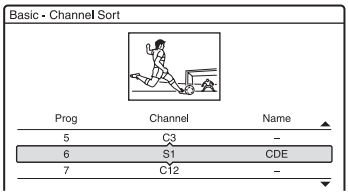
After the programme positions have been set, you can change the order of each programme position in the display list.

1 Select “Channel Sort” in “Basic,” and press ENTER.



2 Press ↑/↓ to select the row containing the programme position you want to move, and press ENTER.
- To display other pages for programme positions 4 to 99, press ↑/↓ repeatedly.

3 Press ↑/↓ until the selected programme position row moves to the desired programme position.
The selected programme position is inserted at the new programme position.



4 Press ENTER to confirm the setting.

5 To change the programme position of another station, repeat from step 2.

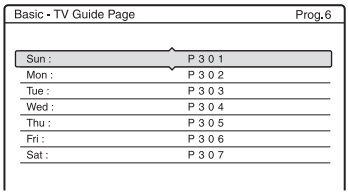
TV Guide Page

Some broadcast systems provide a Teletext service* in which complete programmes and their data (title, date, programme position, recording start time, etc.) are stored day by day. A TV guide page corresponds to each day of the week. When recording a programme, the recorder automatically takes the programme name from the Teletext pages and stores it as the title name. The TV guide page numbers depend entirely on the broadcast itself and may be subject to change. If so, you may have to set those TV guide page numbers manually in the TV Guide Page menu.

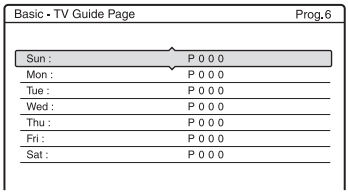
* Not available in some areas.

1 Select “TV Guide Page” in “Basic,” and press ENTER.
The TV Guide Page menu appears.

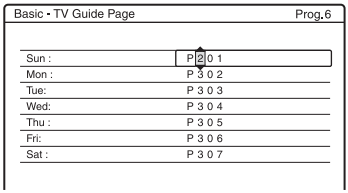
2 Select the programme position for which you want to set or change the TV guide page using PROG +/– or number buttons.
- The TV guide page numbers (Example: P301) appear automatically when the recorder detects them.



- If no page numbers are detected (P000), you have to set the appropriate TV guide page number manually.



3 Select the TV guide page number you want to modify, and press ENTER.



4 Press the number buttons or ←/↑/↓/→ to enter the TV guide page number, and press ENTER to confirm the setting.
- If you make a mistake, re-enter the correct number.
- To return to the original settings, press ↩ RETURN.

5 To set or change another TV guide page number, repeat steps 3 and 4 above.

Hint
To view Teletext information on your TV screen during a broadcast, switch to your TV's tuner by pressing TV/DVD.

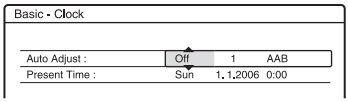
Notes
- In step 4 above, enter "000" if you do not want to use the TV guide page number for automatic labelling. The recorder will instead store a default title name (programme position, start time - stop time).
- Refer to the Teletext information on your TV screen to obtain the TV guide page number with programme titles and their start times.
- If the Teletext TV guide has a page which always shows the programmes for the current day, this page should be input for all days.
- If you start recording more than three minutes before the programme is scheduled to start, the correct label information may not be transferred.
- Note that this function may not work correctly with programmes broadcast from some stations.
- If the broadcast system updates the Teletext information at the moment recording starts, the title label may not correspond to the recorded programme. In this case, you may have to manually enter the correct title (page 32).

Clock

Auto Adjust
Turns on the Auto Clock Set function when a programme position in your local area broadcasts a time signal.

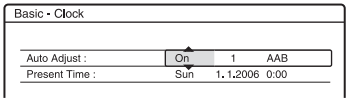
1 Select "Clock" in "Basic," and press ENTER.

2 Select "Auto Adjust," and press ENTER.



3 Select "On," and press →.

4 Press ↑/↓ repeatedly until the programme position of the station that carries a time signal appears, and press ENTER.



- If the recorder does not receive a time signal from any station, "Auto Adjust" returns to "Off" automatically and the menu for setting the clock manually appears on the screen.

Hint
If you set "Auto Adjust" to "On," the Auto Clock Set function is activated whenever the recorder is turned off.

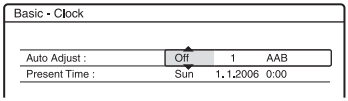
Note
The Auto Clock Set function does not work while the recorder is standing by for Synchro-Recording.

◆To set the clock manually

If the Auto Clock Set function did not set the clock correctly for your local area, try another station for the Auto Clock Set function or set the clock manually.

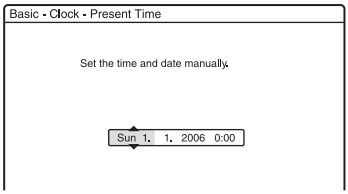
1 Select “Clock” in “Basic,” and press ENTER.

2 Select “Auto Adjust,” and press ENTER.



3 Select “Off,” and press ENTER.

4 Select “Present Time,” and press ENTER.



5 Press ↑/↓ to set the day, and press →. Set the month, year, hour, and minutes in sequence. Press ←/→ to select the item to be set, then press ↑/↓ to set the numbers. The day of the week is set automatically.

To change the numbers, press ← to return to the item to be changed, and press ↑/↓.

6 Press ENTER to start the clock.

OSD (On-Screen Display)

Switches the display language on the screen.

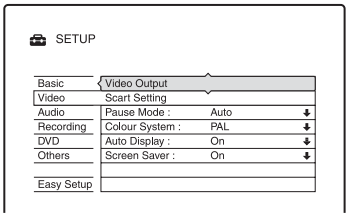
Video Settings (Video)

Video settings will adjust items related to the image, such as size and colour.
Choose the settings according to the type of TV, tuner, or decoder connected to the DVD recorder.

1 Press SYSTEM MENU while the recorder is in stop mode.

2 Select “SETUP,” and press ENTER.

3 Select “Video,” and press ENTER.
The “Video” setup appears with the following options. The default settings are underlined.



Video Output

◆TV Type

Sets the picture size when playing back a title recorded from 16:9 size video (page 41) or a 16:9 size commercial DVD video.
Select the playback picture size according to the type of connected TV (wide-screen/wide mode TV or conventional 4:3 screen TV).

16:9	Select this when connecting to a wide-screen TV or TV with a wide mode function.
4:3 Letter Box	Select this when connecting to a 4:3 screen TV. Displays a wide picture with bands on the upper and lower portions of the screen.
4:3 Pan Scan	Select this when connecting to a 4:3 screen TV. Automatically displays a wide picture on the entire screen and cuts off the portions that do not fit.

→continued

16:9

4:3 Letter Box

4:3 Pan Scan

Note

Depending on the disc, “4:3 Letter Box” may be selected automatically instead of “4:3 Pan Scan” or vice versa.

◆Component Out

Selects whether or not to output video signals from the COMPONENT VIDEO OUT jacks.

On	Outputs the component video signals. Select this when you want to view progressive signals.
Off	Outputs no signals.

Notes

- When you set “Line1 Output” to “RGB,” you cannot set “Component Out” to “On.”
- When you connect the recorder to a monitor or projector via only the COMPONENT VIDEO OUT jacks, do not select “Off.” If you select “Off” in this case, the picture may not appear.

◆Progressive Output

If your TV accepts progressive (525p/625p) format signals, set “Progressive Output” to “On.” You will enjoy accurate colour reproduction and high quality images.

1. Select “Progressive Output,” and press ENTER.
2. Select “On,” and press ENTER.
   The display asks for confirmation.
3. Select “Start,” and press ENTER.
   The video switches to a progressive signal for 5 seconds.
4. If video signal appears OK, select “Yes,” and press ENTER.
   If picture is distorted, select “No,” and press ENTER.

◆Progressive Mode

DVD software can be divided into two types: film based software and video based software. Video based software is derived from TV and displays images at 25 frames/50 fields (30 frames/60 fields) per second. Film based software is derived from film and displays images at 24 frames per second. Some DVD software contains both Video and Film.

In order for these images to appear natural on your screen when output in progressive mode (50 or 60 frames per second), the progressive video signal needs to be converted to match the type of DVD software that you are watching.

You can fine-tune the progressive 525p/625p video signal that is output when you set “Progressive Output” to “On.”

Note that you must connect to a progressive format TV using the COMPONENT VIDEO OUT jacks (page 11).

Auto	Automatically detects the software type (Film-based or Video-based) and selects the appropriate conversion mode. Normally select this position.
Video	Fixes the conversion mode to the mode for Video-based software.

Note

When picture noise appears after you set the recorder to progressive format, hold down ■, and press PROGRAM – (minus) on the unit.

Scart Setting

Sets the method of inputting/outputting signals from the SCART jacks on the rear panel of the recorder. Select an option for each of the items below according to the combination of jacks and methods that you are going to use.

◆Line1 Output

Selects a method of outputting video signals for the LINE 1 – TV jack.

RGB	Outputs RGB signals.
Video	Outputs video signals.
S Video	Outputs S-video signals.

Notes

- If your TV does not accept S-video or RGB signals, no picture appears on the TV screen even if you select "S Video" or "RGB." See the instructions supplied with your TV.
- You cannot select "RGB" when "Component Out" above is set to "On."
- SMARTLINK is available only when "Video" is selected.

◆Line3 Input

Selects a method of inputting video signals for the LINE 3/DECODER jack. The picture will not be clear if this setting does not match the type of video input signal.

Video/ RGB	Inputs video signals or RGB signals.
Decoder	Select this when connecting to a PAY-TV/Canal Plus analogue decoder. If you connect to a cable box/ satellite receiver such as CanalSat, do not select this option.
S Video	Inputs S-video signals.

Note

Input signals are recorded in video mode when "Video/RGB" is selected.

◆Line3 Output

Selects a method of outputting video signals for the LINE 3/DECODER jack.

Video	Outputs video signals.
S Video	Outputs S-video signals.

Pause Mode (DVDs only)

Selects the picture quality in pause mode.

Auto	The picture, including subjects that move dynamically, is output with no jitter. Normally select this position.
Frame	The picture, including subjects that do not move dynamically, is output in high resolution.

Colour System

Selects the colour system when playing VIDEO CDs (including Super VIDEO CDs).

PAL	Plays a disc in PAL colour system.
NTSC	Plays a disc in NTSC colour system.

Auto Display

On	Automatically displays information on the screen when the recorder is turned on, etc.
Off	Displays information only when DISPLAY is pressed.

Screen Saver

The screen saver image appears when you do not use the recorder for more than 10 minutes while an on-screen display, such as the System Menu, is displayed on your TV screen. The screen saver image helps prevent your display device from becoming damaged (ghosting).

On	Turns on the screen saver function.
Off	Turns off the function.

Audio Settings (Audio)

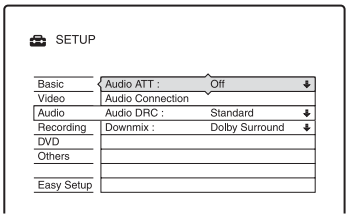
The “Audio” setup allows you to adjust the sound according to the playback and connection conditions.

1 Press SYSTEM MENU while the recorder is in stop mode.

2 Select “SETUP,” and press ENTER.

3 Select “Audio,” and press ENTER.

The “Audio” setup appears with the following options. The default settings are underlined.



Audio ATT (attenuation)

If the playback sound is distorted, set this item to “On.” The recorder reduces the audio output level.
This function affects the output of the following jacks:
– LINE 2 OUT R-AUDIO-L jacks
– LINE 1 – TV jack
– LINE 3/DECODER jack

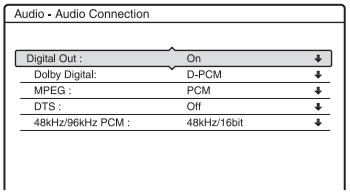
On	Select this when the playback sound from the speakers is distorted.
Off	Normally select this position.

Audio Connection

The following setup items switch the method of outputting audio signals when you connect a component such as an amplifier (receiver) with a digital input jack.
For connection details, see “Step 3: Connecting the Audio Cords” on page 13.
Select “Dolby Digital,” “MPEG,” “DTS,” and “48kHz/96kHz PCM” after setting “Digital Out” to “On.”

If you connect a component that does not accept the selected audio signal, a loud noise (or no sound) will come out from the speakers, and may affect your ears or cause speaker damage.

1 Select “Audio Connection” in “Audio,” and press ENTER.



2 Select “Digital Out,” and press ENTER.

On	Normally select this position.
Off	The influence of the digital circuit upon the analogue circuit is minimal.

3 Select “On,” and press ENTER.

4 Set the digital output signal.

• Dolby Digital (DVDs only)
Selects the type of Dolby Digital signal.

D-PCM	Select this when the recorder is connected to an audio component lacking a built-in Dolby Digital decoder. The surround effects of output signals are determined by the “Downmix” setting item in the “Audio” setup.
Dolby Digital	Select this when the recorder is connected to an audio component with a built-in Dolby Digital decoder.

• MPEG (DVD VIDEOs only)
Selects the type of MPEG audio signal.

PCM	Select this when the recorder is connected to an audio component without a built-in MPEG decoder. If you play MPEG audio sound tracks, the recorder outputs stereo signals via the DIGITAL OUT (COAXIAL) jack.
MPEG	Select this when the recorder is connected to an audio component with a built-in MPEG decoder.

• DTS (DVD VIDEOs only)
Selects whether or not to output DTS signals.

On	Select this when the recorder is connected to an audio component with a built-in DTS decoder.
Off	Select this when the recorder is connected to an audio component without a built-in DTS decoder.

• 48kHz/96kHz PCM (DVD VIDEOs only)
Selects the sampling frequency of the audio signal.

48kHz/ 16bit	The audio signals of DVD VIDEOs are converted to 48 kHz/16 bit and output.
96kHz/ 24bit	All signals containing 96 kHz/24 bit are output without conversion. However, the signals are output at 48 kHz/16 bit if copyright-protected signals are contained.

Note
"48kHz/96kHz PCM" setting has no effect when audio signals are output from the LINE 2 OUT (R-AUDIO-L) jacks or LINE 1 – TV/LINE 3/ DECODER jack. If the sampling frequency is 96kHz, signals are simply converted to analogue signals and output.

Audio DRC (Dynamic Range Control) (DVDs only)

Selects the dynamic range (difference between soft and loud sounds) setting when playing a DVD that conforms to Audio DRC. This affects the output from the following jacks:
– LINE 2 OUT R-AUDIO-L jacks
– LINE 1 – TV jack
– LINE 3/DECODER jack
– DIGITAL OUT (COAXIAL) jack only when "Dolby Digital" is set to "D-PCM" (page 64).

Standard	Normally select this position.
TV Mode	Makes low sounds clear even if you turn the volume down.
Wide Range	Gives you the feeling of being at a live performance.

Downmix (DVDs only)

Switches the method for mixing down to two channels when you play a DVD which has rear sound elements (channels) or is recorded in Dolby Digital format. For details on the rear signal components, see "4. Displaying the Playing/Remaining Time and Play Information" on page 30. This function affects the output of the following jacks:
– LINE 2 OUT R-AUDIO-L jacks
– LINE 1 – TV jack
– LINE 3/DECODER jack
– DIGITAL OUT (COAXIAL) jack when "Dolby Digital" is set to "D-PCM" (page 64).

Dolby Surround	Normally select this position. Multi-channel audio signals are output to two channels for enjoying surround sounds.
Normal	Multi-channel audio signals are downmixed to two channels for use with your stereo.

Recording Settings (Recording)

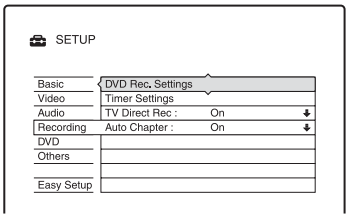
The “Recording” setup allows you to adjust recording settings.

1 Press SYSTEM MENU while the recorder is in stop mode.

2 Select “SETUP,” and press ENTER.

3 Select “Recording,” and press ENTER.

The “Recording” setup appears with the following options. The default settings are underlined.



DVD Rec. Settings

◆ Bilingual Recording

Selects the sound to be recorded on the recordable disc.

Main	Records the main sound for the bilingual programme.
Sub	Records the sub sound for the bilingual programme.

Timer Settings

◆ Rec Mode Adjust

On	Automatically adjusts the recording mode to enable the entire programme to be recorded (page 38).
Off	Turns off the function.

TV Direct Rec (DVD+RW/DVD+R only)

On	Allows you to easily record what you are watching on the TV using SMARTLINK.
Off	Turns off the TV Direct Rec function.

Auto Chapter

Selects whether to automatically divide a recording (a title) into chapters during recording.

On	Inserts chapter marks at approximately 6 minute intervals.
Off	No chapter mark is inserted.

Note

The actual chapter mark interval may vary depending on the amount of information contained in the video to be recorded.

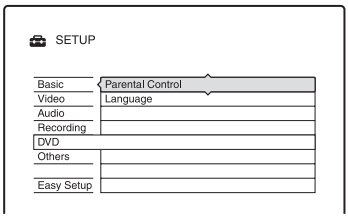
Disc Settings (DVD)

The “DVD” setup allows you to adjust parental control and language settings.

1 Press SYSTEM MENU while the recorder is in stop mode.

2 Select “SETUP,” and press ENTER.

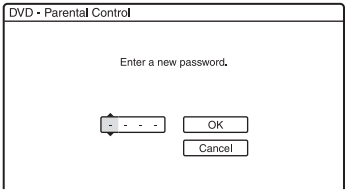
3 Select “DVD,” and press ENTER.
The “DVD” setup appears with the following options. The default settings are underlined.



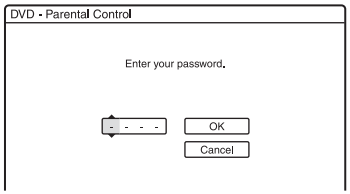
Parental Control (DVD VIDEO only)

Playback of some DVD VIDEOs can be limited according to a predetermined level, such as the age of the users. Scenes may be blocked or replaced with different scenes.

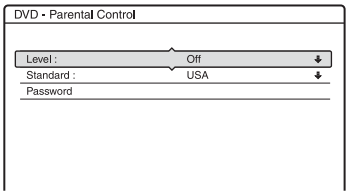
1 Select “Parental Control” in “DVD,” and press ENTER.
- If you have not entered a password, the display for registering a new password appears.



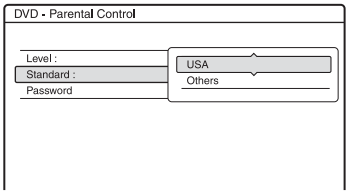
- When you have already registered a password, the display for entering the password appears.



2 Enter your four-digit password using the number buttons, then select “OK” and press ENTER.



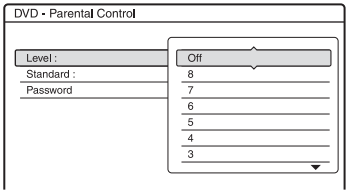
3 Select “Standard,” and press ENTER. The selection items for “Standard” are displayed.



4 Select a geographic area as the playback limitation level, and press ENTER. The area is selected.
- When you select “Others,” press the number buttons to select and enter an area code in the table (page 82). Then select “OK” and press ENTER.

➔continued

5 Select “Level,” and press ENTER.
The selection items for “Level” are displayed.



The lower the value, the stricter the limitation.
Discs rated higher than the selected level will be restricted.

6 Select the level, and press ENTER.
The Parental Control setting is complete.

To cancel the Parental Control setting for the disc, set “Level” to “Off” in step 6.
To change the password, select “Password” in step 3, and press ENTER. When the display for registering a password appears, enter a new four-digit password using the number buttons, then select “OK” and press ENTER.

Notes

- If you forget your password, you will have to reset it by selecting “Parental Control” of “Factory Setup” in the “Others” setup (page 69).
- When you play discs which do not have the Parental Control function, playback cannot be limited on this recorder.
- Depending on the disc, you may be asked to change the Parental Control level while playing the disc. In this case, enter your password, then change the level.

Language (DVD VIDEO only)

◆DVD Menu

Switches the language for the DVD menu.

◆Audio

Switches the language of the sound track. When you select “Original,” the language given priority in the disc is selected.

◆Subtitle

Switches the language of the subtitles recorded on the disc.
When you select “Audio Follow,” the subtitle language changes according to the language you selected for the sound track.

Hint

If you select “Others” in “DVD Menu,” “Subtitle,” or “Audio,” select and enter a language code from “Language Code List” on page 82 using the number buttons.

Note

If you select a language in “DVD Menu,” “Subtitle,” or “Audio” that is not recorded on the DVD VIDEO, one of the recorded languages will be automatically selected.

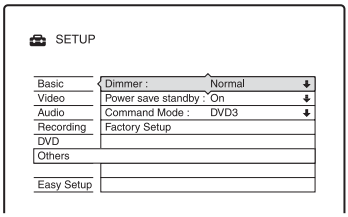
Remote Control Settings/ Factory Settings (Others)

The “Others” setup allows you to set up other operational settings.

1 Press SYSTEM MENU while the recorder is in stop mode.

2 Select “SETUP,” and press ENTER.

3 Select “Others,” and press ENTER.
The “Others” setup appears with the following options. The default settings are underlined.



Dimmer

Adjusts the lighting of the front panel display.

Normal	Bright lighting.
Save Power	Low lighting. Turns off the lighting when the power is off.

Power save standby

Selects whether this recorder is in power save mode when the power is off (standby).

On	Sets to power save mode. Normally, select this.
Off	Does not set to power save mode.

Notes

- Power Save mode does not function when there is a timer setting with “PDC/VPS” set to “On” in the Timer List, even if “Power save standby” is set to “On.”
- The SMARTLINK features are not available while the power is off when “Power save standby” is set to “On.”
- To reduce the number of times that the fan turns on automatically, set “Power save standby” to “On.”

Command Mode

Changes the Command Mode of the recorder if other DVD equipment is assigned the same Command Mode. For details, see “If you have a Sony DVD player or more than one Sony DVD recorder” on page 16.

Factory Setup

Allows you to select the setup settings by group, and return them to their default settings. Note that all of your previous settings will be lost.

1 Select “Factory Setup” in “Others,” and press ➡ or ENTER.
The display for selecting a group of settings appears.

2 Select the group of settings you want to return to default from “Basic,” “Video,” “Audio,” “Recording,” “DVD,” “Others,” “Parental Control,” and “All,” and press ➡ or ENTER.

3 Select “Start,” and press ENTER.
The selected settings return to their default settings.

4 Press ENTER when “Finish” appears.

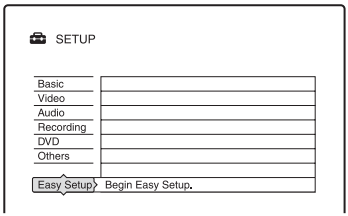
Easy Setup (Resetting the Recorder)

Select this to run the “Easy Setup” programme.

1 **Press SYSTEM MENU while the recorder is in stop mode.**

2 **Select “SETUP,” and press ENTER.**

3 **Select “Easy Setup,” and press ENTER.**



4 **Select “Start.”**

5 **Follow the instructions for “Easy Setup” (page 18) from step 2.**

Troubleshooting

If you experience any of the following difficulties while using the recorder, use this troubleshooting guide to help remedy the problem before requesting repairs. Should any problem persist, consult your nearest Sony dealer.

Power

The power does not turn on.

➡ Check that the mains lead is connected securely.

Picture

There is no picture.

➡ Re-connect all connecting cords securely.
➡ The connecting cords are damaged.
➡ Check the connection to your TV (page 10).
➡ Switch the input selector on your TV (such as to "VCR") so that the signal from the recorder appears on the TV screen.
➡ Check that "Scart Setting" in the "Video" setup is set to the appropriate item that conforms to your system (page 62).
➡ If you connect the recorder to your TV via only the COMPONENT VIDEO OUT jacks, set "Component Out" in the "Video" setup to "On" (page 62).
➡ This recorder cannot record NTSC signals.
➡ When playing a double-layer DVD, the video and audio may be momentarily interrupted at the point where the layers switch.

Picture noise appears.

➡ If the picture output signal from your recorder passes through your VCR to get to your TV, or if you are connected to a combination TV/VIDEO player, the copy-protection signal applied to some DVD programmes could affect picture quality. If you still experience this problem even when you connect your recorder directly to your TV, try connecting your recorder to your TV's S VIDEO input.
➡ You have set the recorder to progressive format even though your TV cannot accept the progressive signal. In this case, hold down ■, and press PROGRAM – (minus) on the unit.
➡ Even if your TV is compatible with progressive format (525p/625p) signals, the image may be affected when you set the recorder to progressive format. In this case, hold down ■, and press PROGRAM – (minus) on the unit and the recorder is set to normal (interlace) format.
➡ You are playing a DVD recorded in a colour system that is different from your TV.
➡ When playing a double-layer DVD, the video and audio may be momentarily interrupted at the point where the layers switch.

TV programme reception does not fill the screen.

➡ Set the channel manually in "Channel Setting" in the "Basic" setup (page 57).
➡ Select the correct source using the INPUT SELECT button, or select a channel of any TV programme using the PROG +/– buttons.

TV programme pictures are distorted.

➡ Reorient the TV aerial.
➡ Adjust the picture (see the TV's instruction manual).
➡ Place the recorder and TV farther apart.
➡ Place the TV and any bunched aerial cables farther apart.
➡ The aerial cable is connected to the AERIAL OUT jack on the recorder. Connect the cable to the AERIAL IN jack.

➡continued

TV channels cannot be changed.

➡ The channel is disabled (page 58).
➡ A timer recording started, which changed the channels.

The picture from equipment connected to the recorder's input jack does not appear on the screen.

➡ If the equipment is connected to the LINE 1 – TV jack, select "L1" in the front panel display by pressing PROG +/– or INPUT SELECT.
If the equipment is connected to the LINE 2 IN jacks, select "L2" in the front panel display by pressing PROG +/– or INPUT SELECT.
If the equipment is connected to the LINE 3/DECODER jack, select "L3" in the front panel display by pressing PROG +/– or INPUT SELECT.

The playback picture or TV programme from the equipment connected through the recorder is distorted.

➡ If the playback picture output from a DVD player, VCR, or tuner goes through your recorder before reaching your TV, the copy-protection signal applied to some programmes could affect picture quality. Disconnect the playback equipment in question and connect it directly to your TV.

The picture does not fill the screen.

➡ Set "TV Type" of the "Video Output" in the "Video" setup in accordance with the screen size of your TV (page 61).

The picture does not fill the screen, even though the picture size is set in "TV Type" of the "Video Output" in the "Video" setup.

➡ The picture size of the title is fixed.

The picture is black and white.

➡ Check that "Line1 Output" of the "Scart Setting" in the "Video" setup is set to the appropriate item that conforms to your system (page 62).
➡ If you are using a SCART cord, be sure to use one that is fully wired (21 pins).

Sound

There is no sound.

➡ Re-connect all connections securely.
➡ The connecting cord is damaged.
➡ The input source setting on the amplifier or the connection to the amplifier is incorrect.
➡ The recorder is in reverse play, fast-forward, slow motion, or pause mode.
➡ If the audio signal does not come through the DIGITAL OUT (COAXIAL) jack, check the "Audio Connection" settings in the "Audio" setup (page 64).

Sound distortion occurs.

➡ Set "Audio ATT" in the "Audio" setup to "On" (page 64).

Sound is noisy.

➡ When playing a CD with DTS sound tracks, noise will come from the LINE 2 OUT R-AUDIO-L jacks, LINE 1 – TV jack, or LINE 3/DECODER jack (page 49).

The sound volume is low.

➡ The sound volume is low on some DVDs. The sound volume may improve if you set "Audio DRC" in the "Audio" setup to "TV Mode" (page 65).
➡ Set "Audio ATT" in the "Audio" setup to "Off" (page 64).

An alternate audio track cannot be recorded or played.

➡ When recording from connected equipment, set "Line Audio Input" in OPTIONS menu to "Bilingual" (page 45).
➡ Multilingual tracks (main and sub) cannot be recorded on DVD+RWs or DVD+Rs. To record the language, set "Bilingual Recording" of the "DVD Rec. Settings" in the "Recording" setup to "Main" or "Sub" before recording (page 66).
➡ Any discs cannot be used for recording both main and sub sounds.
➡ If you have connected an AV amplifier to the DIGITAL OUT (COAXIAL) jack and want to change the audio track for DVD-RWs/DVD-Rs (VR mode) during playback, set "Dolby Digital" of the "Audio Connection" in the "Audio" setup to "D-PCM" (page 64).

Playback

The recorder does not play any type of disc.

➡ The disc is upside down. Insert the disc with the labelled side facing up.
➡ The disc is not correctly inserted.
➡ Moisture has condensed inside the recorder. In this case, if the recorder is on, leave it on (if it is off, leave it off) for about an hour until the moisture evaporates.
➡ If the disc was recorded on another recorder and was not finalised (page 34), the recorder cannot play the disc.

The recorder does not start playback from the beginning.

➡ Resume play was activated (page 47).
➡ You have inserted a DVD whose Title menu or DVD menu automatically appears on the TV screen when it is first inserted. Use the menu to start playback.

The recorder starts playing automatically.

➡ The DVD VIDEO features an auto playback function.

Playback stops automatically.

➡ If the DVD has an auto pause signal, the recorder stops playback at the auto pause signal.

Some functions such as Stop, Search, or Slow-motion Play cannot be performed.

➡ Depending on the DVD, you may not be able to do some of the operations above. See the instruction manual supplied with the disc.

The language for the sound track cannot be changed.

➡ Multilingual tracks are not recorded on the DVD being played.
➡ The DVD VIDEO prohibits the changing of the language for the sound track.
➡ Try changing the language using the DVD VIDEO's menu.

The subtitle language cannot be changed or turned off.

➡ Multilingual subtitles are not recorded on the DVD VIDEO.
➡ The DVD VIDEO prohibits changing of the subtitles.
➡ Try changing the subtitle using the DVD VIDEO's menu.
➡ The subtitles cannot be changed for the titles recorded on this recorder.

The angles cannot be changed.

➡ Multi-angles are not recorded on the DVD VIDEO being played.
➡ You are trying to change the angles when "" does not appear on the TV screen (page 46).
➡ The DVD VIDEO prohibits changing angles.
➡ Try changing the angle using the DVD VIDEO's menu.
➡ The angles cannot be changed for the titles recorded on this recorder.
➡ The angles cannot be changed during slow motion playback or when playback is paused.

The MP3 audio tracks do not play.

➡ The MP3 audio tracks are not recorded in a format that the recorder can play (page 51).

Recording/Timer recording/ Editing

The programme position cannot be changed from the programme position you are recording.

➡ Set the TV's input source to "TV."

Recording does not start immediately after you press ● REC.

➡ Operate the recorder only after "LOAD," "FORMAT," or "INFOWRITE" disappears from the front panel display.

Nothing was recorded even though you set the timer setting correctly.

➡ There was a power failure during recording.
➡ The recorder's internal clock stopped due to a power failure that lasted for more than 1 hour. Reset the clock (page 60).
➡ The channel was disabled after the timer recording was set. See "Channel Setting" on page 57.
➡ Disconnect the mains lead from the mains, and connect it again.
➡ "PDC/VPS Scan Off" was selected in the OPTIONS menu (page 38).
➡ The programme contains copy protection signals that restrict copying.
➡ Other timer setting overlapped the timer setting (page 43).
➡ There is no DVD inside the recorder.
➡ There is not enough disc space for the recording.

Recording does not stop immediately after you press ■ REC STOP.

➡ It will take a few seconds for the recorder to input disc data before recording can stop.

Recording does not stop after you press ■.

➡ Press ■ REC STOP.

Timer recording is not complete or did not start from the beginning.

➡ There was a power failure during recording. If the power recovers when there is a timer recording, the recorder resumes recording. Should the power failure continue for more than 1 hour, reset the clock (page 60).
➡ Other timer setting overlapped the timer setting (page 43).
➡ Disc space was not enough.
➡ The PDC/VPS function is working.

Contents previously recorded were erased.

➡ Data that is not playable on this recorder but was recorded on a DVD with a PC will be erased from the disc when the disc is inserted.

The PDC/VPS function does not operate.

➡ Check that the clock and date are set correctly.
➡ Check that the PDC/VPS time you set is the correct one (there might be a mistake in the TV programme guide). If the broadcast you wanted to record did not send the good PDC/VPS information, the recorder will not start recording.
➡ If the reception is poor, the PDC/VPS signal might be altered and the recorder might not start recording.
➡ "PDC/VPS Scan Off" is selected (page 38).

Recording/editing is not possible.

➡ DVD-RWs and DVD-Rs cannot be recorded (page 7) or edited (page 54).

Recording from the equipment with a timer

Nothing was recorded even though you set the Synchro-Rec setting correctly.

➡ You forgot to turn off the connected equipment. Turn off the connected equipment and set the recorder to Synchro-Rec standby mode (page 44).
➡ The recorder was not set to the Synchro-Recording standby mode. Press → ● SYNCHRO REC to have the recorder stand by for recording. Make sure the SYNCHRO REC indicator lights up on the front panel (page 44).
➡ The equipment is not connected to the LINE 3/DECODER jack of the recorder.
➡ The recorder is connected to the TV output jack of the connected equipment.

Synchro-Recording does not complete.

➡ The timer setting for the connected equipment overlapped the recorder's timer setting (page 45).
➡ There was a power failure during the recording.

The recorder automatically starts recording when the satellite receiver is turned on.

➡ The Synchro-Rec function was activated. Turn off the satellite receiver and cancel the Synchro-Rec function (page 44).

Display

The clock has stopped.

➡ Set the clock again (page 60).

➡ The clock stopped due to a power failure that lasted for more than 1 hour. Reset the clock (page 60).

The TIMER REC indicator is flashing.

➡ The disc does not have enough space.

➡ Insert a recordable disc inside the recorder.

The recording mode indication is incorrect.

➡ When the recording is less than three minutes, the recording mode indication may be displayed incorrectly. The actual recording itself is correctly made in the selected recording mode.

➡ After playing titles recorded in EP and SLP mode, the recording mode indication may change depending on the recorded programme.

The clock does not appear in the front panel display when the recorder is turned off.

➡ "Dimmer" in the "Others" setup is set to "Save Power" (page 69).

Remote control

The remote does not function.

➡ Batteries are weak.

➡ The remote is too far from the recorder.

➡ The remote's manufacturer code returned to the default setting when you replaced the batteries. Reset the code (page 15).

➡ The remote is not pointed at the remote sensor on the recorder.

➡ Different command modes are set for the recorder and remote. Set the same command mode (page 16). The default command mode setting for this recorder and the supplied remote is DVD3.

➡ Press ■ (stop) on the unit while the recorder is turned off to check the current command mode.

Others

The recorder does not operate properly.

➡ Restart the recorder. Press down I/⏻ on the recorder for more than ten seconds until "WELCOME" appears in the front panel display.

➡ When static electricity, etc., causes the recorder to operate abnormally, turn off the recorder and wait until the clock appears in the front panel display. Then, unplug the recorder and after leaving it off for a while, plug it in again.

Five numbers or letters are displayed in the front panel display.

➡ The self-diagnosis function was activated (see the table on page 76).

The disc tray does not open after you press ⏏ (open/close).

➡ It may take a few seconds for the disc tray to open after you have recorded or edited a DVD. This is because the recorder is adding disc data to the disc.

The disc tray does not open and "LOCKED" appears in the front panel display.

➡ The disc tray is locked. Cancel the Child Lock (page 47).

The disc tray does not open and "TRAY LOCKED" appears in the front panel display.

➡ Contact your Sony dealer or local authorized Sony service facility.

➡continued

The disc tray does not open and you cannot remove the disc after you press ⏏ (open/close).

➡ Turn off the recorder. Once the clock appears in the front panel display, disconnect the mains lead. (If the recorder does not turn off or if the clock does not appear in the front panel display, disconnect the mains lead anyway.) Connect the mains lead again while pressing down ⏏ on the recorder, and release the button when the disc tray opens. Then, keep I/⏻ on the recorder pressed for about ten seconds until "WELCOME" appears in the front panel display.

"RECOVERY" appears in the front panel display.

➡ The recorder's recovery function was activated when the recorder was turned on because the power was turned off or failed during recording. Leave the recorder on until "RECOVERY" disappears from the front panel display.

"FAN ERROR" appears in the front panel display.

➡ Check that the vent on the rear of the recorder is not blocked. Then, immediately disconnect the mains lead. Leave the recorder off for a while, then re-connect the mains lead, and press I/⏻ on the recorder.

Mechanical sound is heard when the recorder is off.

➡ While the recorder is adjusting the clock for the Auto Clock Set function or scanning the programme positions for the PDC/VPS function, operational noises (such as the internal fan) may be heard, even when the power is off. This is not a malfunction.

➡ To reduce the number of times that the fan turns on automatically, set "Power save standby" to "On" in the "Others" setup (page 69).

Self-diagnosis Function (When letters/numbers appear in the display)

When the self-diagnosis function is activated to prevent the recorder from malfunctioning, a five-character service number (e.g., C 13 00) with a combination of a letter and four numbers appears in the front panel display. In this case, check the following table.

First three characters of the service number	Cause and/or corrective action
C 13	The DVD is dirty. ➡ Clean the disc with a soft cloth.
C 31	The DVD/CD is not inserted correctly. ➡ Re-insert the disc correctly.
E XX (xx is a number)	To prevent a malfunction, the recorder has performed the self-diagnosis function. ➡ Contact your nearest Sony dealer or local authorized Sony service facility and give the five-character service number. Example: E 61 10

Notes About This Recorder

On operation

- If the recorder is brought directly from a cold to a warm location, or is placed in a very damp room, moisture may condense on the lenses inside the recorder. Should this occur, the recorder may not operate properly. In this case, if the recorder is on, leave it on (if it is off, leave it off) for about an hour until the moisture evaporates.
- When you move the recorder, take out any discs. If you don't, the disc may be damaged.

On adjusting volume

Do not turn up the volume while listening to a section with very low level inputs or no audio signals. If you do, the speakers may be damaged when a peak level section is played.

On cleaning

Clean the cabinet, panel, and controls with a soft cloth slightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzine.

On cleaning discs, disc/lens cleaners

Do not use a commercially available cleaning disc or disc/lens cleaner (wet or spray type). These may cause the recorder to malfunction.

Notes about the discs

- To keep the disc clean, handle the disc by its edge. Do not touch the surface. Dust, fingerprints, or scratches on the disc may cause it to malfunction.

- Do not expose the disc to direct sunlight or heat sources such as hot air ducts, or leave it in a car parked in direct sunlight as the temperature may rise considerably inside the car.
- After playing, store the disc in its case.
- Clean the disc with a cleaning cloth. Wipe the disc from the centre out.

- Do not use solvents such as benzine, thinner, commercially available cleaners, or anti-static spray intended for vinyl LPs.
- Do not use the following discs.
  - A disc that has a non-standard shape (e.g., card, heart).
  - A disc with a label or sticker on it.
  - A disc that has cellophane tape or sticker adhesive on it.

Specifications

System

Laser: Semiconductor laser

Channel coverage:

PAL (B/G, D/K, I)
VHF: E2 to E12, R1 to R12, Italian A to H, Ireland A to J, South Africa 4 to 13
UHF: E21 to E69, R21 to R69, B21 to B69
CATV: S01 to S05, S1 to S20
HYPER: S21 to S41

The above channel coverage merely ensures the channel reception within these ranges. It does not guarantee the ability to receive signals in all circumstances. For details, see "Receivable channels" (page 58).

Video reception: Frequency synthesizer system

Audio reception: Split carrier system

Aerial out: 75-ohm asymmetrical aerial socket

Timer: Clock: Quartz locked/Timer indication: 24-hour cycle (digital)/ Power back-up duration: 1 hour

Video recording format: MPEG-2, MPEG-1

Audio recording format/applicable bit rate: Dolby Digital 2 ch
256 kbps/128 kbps (in EP and SLP mode)

Inputs and outputs

LINE 2 OUT

(AUDIO): Phono jack/2 Vrms/10 kilohms

(VIDEO): Phono jack/1.0 Vp-p

(S VIDEO): 4-pin mini DIN/Y:1.0 Vp-p, C: 0.3 Vp-p (PAL)

LINE 2 IN

(AUDIO): Phono jack/2 Vrms/more than 22 kilohms

(VIDEO): Phono jack/1.0 Vp-p

(S VIDEO): 4-pin mini DIN/Y:1.0 Vp-p, C: 0.3 Vp-p (PAL)

LINE 1 – TV: 21-pin
CVBS IN/OUT
S-Video/RGB OUT (upstream)

LINE 3/DECODER: 21-pin
CVBS IN/OUT
S-Video/RGB IN
(RGB signals cannot be recorded)
S-Video OUT (downstream)
Decoder

DIGITAL OUT (COAXIAL): Phono jack/ 0.5 Vp-p/75 ohms

COMPONENT VIDEO OUT (Y, P_B/C_B, P_R/C_R):
Phono jack/Y: 1.0 Vp-p,
P_B/C_B: 0.7 Vp-p,
P_R/C_R: 0.7 Vp-p

General

Power requirements: 220-240 V AC, 50/60 Hz

Power consumption: 20 W

Dimensions (approx.):
430 × 58 × 291 mm (width/height/ depth) incl. projecting parts

Mass (approx.): 3.1 kg

Operating temperature: 5ºC to 35ºC

Operating humidity: 25% to 80%

Supplied accessories:
Mains lead (1)
Aerial cable (1)
Remote commander (remote) (1)
R6 (size AA) batteries (2)

Specifications and design are subject to change without notice.

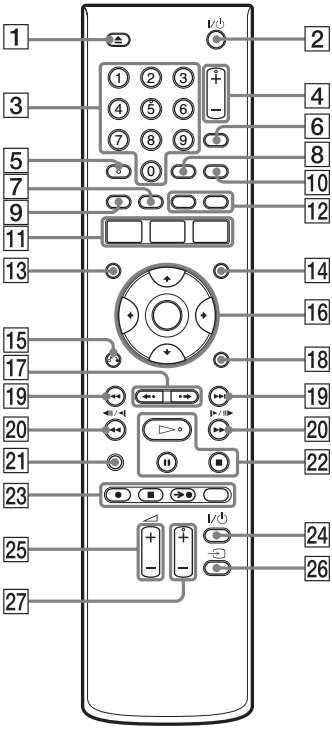
Compatible colour systems

This recorder is designed to record using the PAL colour system and play back using the PAL or NTSC colour systems.

Guide to Parts and Controls

For more information, see the pages in parentheses.

Remote



1 ⏏ (open/close) button (26)

2 I/⏻ (on/standby) button (18)

3 Number buttons (40, 50)
The number 5 button has a tactile dot*.

4 PROG (programme) +/– buttons (26)
The + button has a tactile dot*.

5 AUDIO button (48)
The AUDIO button has a tactile dot*.

6 INPUT SELECT button (45)

7 MENU button (46)

8 SET button (17)

9 TOP MENU button (46)

10 TV/DVD button (15)

11 SYSTEM MENU button (57)
TITLE LIST button (28, 46, 54)
TIMER button (37, 40)

12 SUBTITLE button (48)
ANGLE button (48)

13 DISPLAY button (30)

14 TIMER LIST button (42)

15 RETURN button (42)

16 ←/↑/↓/→/ENTER button (18)

17 ←• (instant replay)/•→ (instant advance) buttons (28, 51)

18 OPTIONS button (35)

19 I◀◀/▶▶I (previous/next) buttons (48)

20 ◀◀/◀II/◀I/I▶/II▶/▶▶ (search/slow/freeze frame) buttons (48)

21 TIME/TEXT button (30)

22 ▷ (play) button (46)
II (pause) button (48)
■ (stop) button (46)
The ▷ button has a tactile dot*.

23 ● REC button (26)
■ REC STOP button (26)
→ ● SYNCHRO REC button (44)
REC MODE button (26)

24 TV I/⏻ (TV on/standby) button (15)

25 TV ◿ (volume) +/– buttons (15)

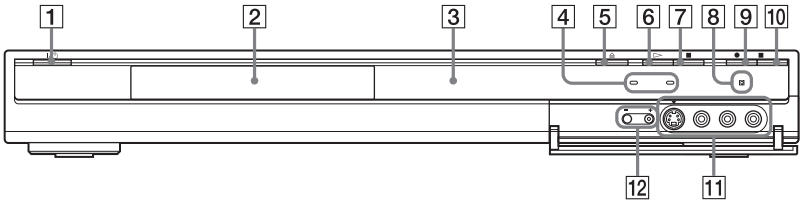
26 TV ⏎ button (15)

27 TV PROG (TV programme) +/– buttons (15)
The + button has a tactile dot*.

* Use the tactile dot as a reference when operating the recorder.

→continued

Front panel



1 I/⏻ (on/standby) button (18)

2 Disc tray (26)

3 Front panel display (31, 80)

4 TIMER REC indicator (37)
SYNCHRO REC indicator (44)

5 ⏏ (open/close) button (26)

6 ▷ (play) button (46)

7 ■ (stop) button (46)

8 ℝ (remote sensor) (15)

9 ● REC button (26)

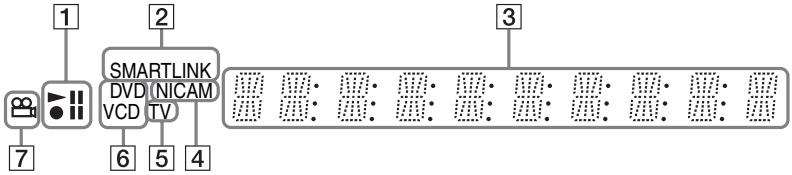
10 ■ REC STOP button (26)

11 LINE 2 IN (S VIDEO/VIDEO/ L(MONO) AUDIO R) jacks (20)

12 PROGRAM +/– buttons (26)
The + button has a tactile dot*.

* Use the tactile dot as a reference when operating the recorder.

Front panel display



1 Playing/recording status

2 SMARTLINK indicator (12)

3 Displays the following (31):
- Playing time/remaining time
- Current title/chapter/track/index number
- Recording time/recording mode
- Clock
- Programme position
- TV Direct Rec indication (26): "TV" appears in the right most two digits.

4 NICAM indicator (36)

5 TV indicator (26)

6 Disc type*

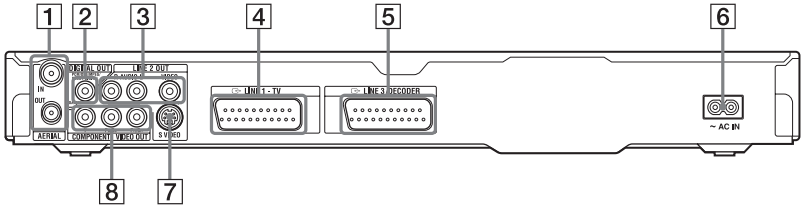
7 (angle) indicator (48)

* Displays DATA CDs as "CD."

Hint

You can turn off the front panel display when the recorder is turned off by setting "Dimmer" to "Save Power" in the "Others" setup (page 69).

Rear panel



1 AERIAL IN/OUT jacks (10)

2 DIGITAL OUT (COAXIAL) jack (13)

3 LINE 2 OUT (R-AUDIO-L/VIDEO) jacks (11, 13)

4 LINE 1 – TV jack (11)

5 LINE 3/DECODER jack (19)

6 AC IN terminal (14)

7 LINE 2 OUT (S VIDEO) jack (11)

8 COMPONENT VIDEO OUT (Y, P_B/C_B, P_R/C_R) jacks (11)

Language Code List

For details, see page 68.

The language spellings conform to the ISO 639: 1988 (E/F) standard.

Code	Language	Code	Language	Code	Language	Code	Language
1027	Afar	1183	Irish	1347	Maori	1507	Samoan
1028	Abkhazian	1186	Scots Gaelic	1349	Macedonian	1508	Shona
1032	Afrikaans	1194	Galician	1350	Malayalam	1509	Somali
1039	Amharic	1196	Guarani	1352	Mongolian	1511	Albanian
1044	Arabic	1203	Gujarati	1353	Moldavian	1512	Serbian
1045	Assamese	1209	Hausa	1356	Marathi	1513	Siswati
1051	Aymara	1217	Hindi	1357	Malay	1514	Sesotho
1052	Azerbaijani	1226	Croatian	1358	Maltese	1515	Sundanese
1053	Bashkir	1229	Hungarian	1363	Burmese	1516	Swedish
1057	Byelorussian	1233	Armenian	1365	Nauru	1517	Swahili
1059	Bulgarian	1235	Interlingua	1369	Nepali	1521	Tamil
1060	Bihari	1239	Interlingue	1376	Dutch	1525	Telugu
1061	Bislama	1245	Inupiak	1379	Norwegian	1527	Tajik
1066	Bengali; Bangla	1248	Indonesian	1393	Occitan	1528	Thai
		1253	Icelandic	1403	(Afan)Oromo	1529	Tigrinya
1067	Tibetan	1254	Italian	1408	Oriya	1531	Turkmen
1070	Breton	1257	Hebrew	1417	Punjabi	1532	Tagalog
1079	Catalan	1261	Japanese	1428	Polish	1534	Setswana
1093	Corsican	1269	Yiddish	1435	Pashto; Pushto	1535	Tonga
1097	Czech	1283	Javanese			1538	Turkish
1103	Welsh	1287	Georgian	1436	Portuguese	1539	Tsonga
1105	Danish	1297	Kazakh	1463	Quechua	1540	Tatar
1109	German	1298	Greenlandic	1481	Rhaeto-Romance	1543	Twi
1130	Bhutani	1299	Cambodian			1557	Ukrainian
1142	Greek	1300	Kannada	1482	Kirundi	1564	Urdu
1144	English	1301	Korean	1483	Romanian	1572	Uzbek
1145	Esperanto	1305	Kashmiri	1489	Russian	1581	Vietnamese
1149	Spanish	1307	Kurdish	1491	Kinyarwanda	1587	Volapük
1150	Estonian	1311	Kirghiz	1495	Sanskrit	1613	Wolof
1151	Basque	1313	Latin	1498	Sindhi	1632	Xhosa
1157	Persian	1326	Lingala	1501	Sangho	1665	Yoruba
1165	Finnish	1327	Laothian	1502	Serbo-Croatian	1684	Chinese
1166	Fiji	1332	Lithuanian			1697	Zulu
1171	Faroese	1334	Latvian; Lettish	1503	Singhalese		
1174	French			1505	Slovak		
1181	Frisian	1345	Malagasy	1506	Slovenian	1703	Not specified

Area Code

For details, see page 67.

Code	Area	Code	Area	Code	Area	Code	Area
2044	Argentina	2165	Finland	2362	Mexico	2149	Spain
2047	Australia	2174	France	2376	Netherlands	2499	Sweden
2046	Austria	2109	Germany	2390	New Zealand	2086	Switzerland
2057	Belgium	2248	India	2379	Norway	2528	Thailand
2070	Brazil	2238	Indonesia	2427	Pakistan	2184	United Kingdom
2079	Canada	2254	Italy	2424	Philippines		
2090	Chile	2276	Japan	2436	Portugal		
2092	China	2304	Korea	2489	Russia		
2115	Denmark	2363	Malaysia	2501	Singapore		

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